

# Amazing

Fact and Science Fiction

stories

OCTOBER

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## ESCAPE FROM ORBIT

by Poul Anderson

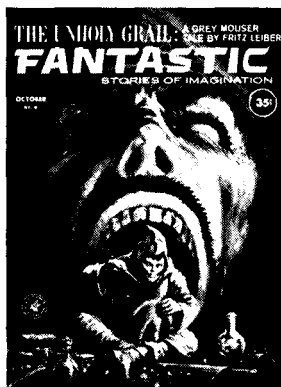
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Henry Kuttner



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# Amazing

Fact and Science Fiction Stories

OCTOBER, 1962

Vol. 36, No. 10

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Cover: Bill Conlan

Illustrating *Escape from Orbit*

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## EDITORIAL

THERE is a good deal of discussion these days—especially at universities—about the relative contributions to the world's culture of science and the humanities. Ideally, as the British writer and scientist C. P. Snow has pointed out, the modern man of learning should be knowledgeable in both fields; a New Renaissance paragon, so to speak.

In this perspective, we found it fascinating to read a brief colloquy comparing the intellectual scope of history versus science. It appeared in an unsigned essay, titled "Dialogue on the Heights," in the Columbia University Forum:

—You said something about science seeming to you in some way narrow. You talked about the infinite scope of history. Perhaps it is infinite in the sense of its divisibility into times and shades and relevant actors and so on. But history is finite at any time in the sense that you are not writing the history of the future excepting as you live it at the moment. History cannot project its own study out into the future, at least not as we know it now. But physics or any kind of science has this added sort of dimension. It keeps adding new factual

knowledge so rapidly that a very large fraction of everything that has ever been written in the scientific field has been written, say, in the last ten years. And it is not rehashing. There is rehashing, of course. But so much of science is writing something completely new into the record. And so it is the curious ability of science to expand its own scope that in a way sets it apart from the study of the past.

—History, then, is made finite by the present, but science enlarges its own future?

—Science is a body of knowledge that can grow more rapidly than just in direct proportion to the passage of time. History, I suppose, in a sense can too, as long as the population grows—more people making more history per second. But science as a body of organized knowledge grows quite beyond there being just more people and more elapsed time.

—I see what you mean.

—The power of the subject itself to create new knowledge is also growing. And of course, to twit you a moment, nothing can be more infinite than infinity.

—A suitable closing, if a shameless remark.

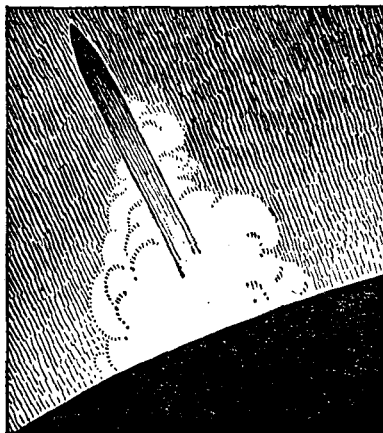


**The Yankee was wrecked. In the ditching capsule three men sat rigid, locked in their spacesuits, jammed so close together they could hardly breathe. What do you say to the one beside you as you fall helpless over the night side of the moon? And, down on Earth, at ground control, what can they say?**

# **ESCAPE FROM ORBIT**

**By POUL ANDERSON**

Illustrated by FINLAY



**T**HE ringing cut like a buzzsaw. For a moment Wister denied it. He was riding a white horse whose mane and tail were flames, the great muscles surged between his thighs, wind roared and whipped about him, smelling of summer meadows. *Brrrrng!* Bees droned through clover. The wind had a tinge of Julie's hair, a sunny odor, but a sharp clean whiff of rocket fuel strengthened as it thrust against him. The horse made one enormous bound and left Earth.



Meadows dwindled, the sky darkened until it was an infinitely deep Bonestell blue, and the stars of space glittered forth. *Brrrng!* The horse said with his father's voice,—That's the Big Dipper, which they used to call King Charles' Wain, but long ago it was Odin's *Brrrng!* and at night *Brrrng!* Jupiter far cold mysterious *Brrrng!* Saturn Pluto Andromeda *Brrrng!* outward upward upward *Brrrng!* up up UP WHETHER YOU LIKE IT OR NOT BRRRNG BRRRNG BRRRNG!

The blackness confused him. At this time of year, the sun rose before his alarm went off. Wister flailed his arms blindly, batting away the evil fragments which his dream had become. Florence stirred beside him, muttered herself awake, and sank back into sleep as Wister got control. She snored a little.

The clock face glowed with a small hour. Damnation, that wasn't the alarm, it was the phone. *Brrrng!* Wister swung out of bed. The floor was cool under his bare feet. It relieved the stickiness of his skin a little. He'd been sweating like a pig, though the night wasn't hot so early in summer.

"Okay, okay, okay," he grumbled automatically, felt his way into the hall and switched on the light. It struck at his eyes as the phone did at his ears. He squinted against it and picked up the

receiver. Still only partly active, his mind conjured forth horrible reasons for a night call and his pulse flapped. "Hello?"

"Dick?" Charlie Huang's voice relieved him of deaths in his sister's family and imminent nuclear attack. "Sorry, but you've got to get down here soonest. The whole bunch of us, in fact. *Yankee's* wrecked."

"Huh?"

"Meteor strike."

"Can't be! The odds—"

"It had to happen sometime, didn't it? So it happened early in the space flight game, instead of a hundred years from now. I'll fill you in when you arrive. The boys escaped in their ditching capsule. Nothing else was left. They're stuck in orbit around the Moon."

WISTER shook his head violently, trying to clear it. None of this made sense. Even if a ship was hulled by a meteorite, or by a dozen meteorites, you didn't abandon it. You slapped patches over the holes and started repair work on whatever machinery was damaged. Didn't you?

Maybe not. This was the first such accident on record.

There was a click in the receiver. His boss had hung up, doubtless to call someone else. Wister groped on into the kitchen. Make haste slowly, he told himself. Nothing much could be



done till the entire gang was assembled, which would take over an hour. Meanwhile he could best stoke his brain with coffee. When young he had always woken up refreshed, set to go, but in recent years he roused slow and gluey-eyed.

*Now cut that out*, he scolded. *Thirty-four is not old.*

The kitchen looked even more dismal than usual. Ordinarily Jim was up with him, chattering away sixty to the dozen while he made breakfast for them; and sunlight rioted in the flowerbeds just outside. This morning he had no distraction from yesterday's dirty dishes. He washed the coffeepot with some difficulty—the sink was full too—and set it to work while he went into the bathroom.

Stripped, he regarded himself for an instant of distaste. He was still fairly slender, but his efforts to keep in shape didn't entirely cope with the effects of a desk job. Slowly pot belly and pudding legs overtook him. For the *n*th time he resolved to put in an hour a day at the local gym, knew he wouldn't keep the resolution, and swore wearily.

When the shower struck him with hot needles, his bloodstream began moving at a normal pace. It carried the remaining fog out of his head. Briefly he was shocked at himself, worried about his waistline while Cy En-

wright and Phil Cohn and Bruno Fellini spun through the shadows behind the Moon. *My God, what am I going to say to their people?* He turned off the water, stepped from the tub, and toweled with quick harsh motions. *I won't say a word. I'll be too busy getting them back home alive.*

*How?*

He returned to the bedroom, switched on the light and dressed. Florence didn't stir. Her face sagged in sleep, as her body did awake, an unhealthy color. She was still snoring. Somehow the knowledge of three men who were his friends, caged among the cold stars, raised a tenderness in Wister. It wasn't Flo's doing that she stopped being the sun and surf and moonglade girl he married, after Jim was born. Some damned glandular change that the doctors couldn't pin down, too subtle for them. . . .

She'd have to get Jim off to school today. He scribbled a note and tucked it under the alarm clock before he went out to the kitchen. Coffee and a doughnut brought him to full alertness, but he didn't think about the job on hand. That would be useless until he knew just what had happened. Instead he visualized the *Yankee* boys.

**B**IG, soft-spoken Cy Enwright, Col. USAF Reserve, but you couldn't tell it from his manner.

His wife outshone him when you first met them, he seemed only background for her beauty and vivacity—till you got to know them well, then it dawned on you that most of what she was had its source in him, dry wit and calm philosophy and the steel backbone that made her able to laugh with their friends while he was away in space. The other two described themselves as career civilians, though Phil Cohn had served in the Southeast Asia guerrillas some years ago. He was small and dark and quick-moving, a trifle on the bookish side and a nut about Mozart, but also a football fan and hell on wheels at the poker table. This summer he was going to get married and present his mother with the grandchildren she'd been pestering him for. Bruno Fellini, the youngest and handsomest of NASA's stable, wasn't interested in marriage—just women. There had been a couple of hilarious times when the public relations boys must scuttle around like toads in a pot, hushing up affairs that would spoil the Image. Bruno didn't give a damn. He knew perfectly well he was too adroit a rocket pilot to be fired. But loud sports shirt, cocky gait, bad puns, and all, he was the kind of guy who brought flowers when invited to dinner and would give his last buck to a friend.

*And then there's me, Wister thought. We get along pretty well, we four. Yakking, bowling, partying, borrowing tools and books and maybe five till payday, now and then getting drunk together . . . yeh, we talk about buying a fifty-foot cruiser one of these years and bumming around the Caribbean or the Mediterranean . . . odd how close people become after they've shared such trivia long enough.*

*Those three men have never said or hinted or thought that I'm any less than them, because I turned groundling while they went to Mars and back. Never once.*

He rose from the table. Impulsively, he ducked back along the hall, into Jim's room. The boy still slept with Boo, though the bear's fur was long worn off and little remained of its face except a silly grin. Otherwise the room held the normal clutter of an eight-year-old, and Wister didn't worry too much about him any more. Jim had almost stopped having nightmares, and was now growing at a satisfactory rate. Wister bent close above the tangled head. *Funny, he thought, what a warm clean smell children have. They lose it at adolescence. I wonder how come?*

For some reason he was reminded of Julie Quist. He'd almost married her, a dozen years ago in Michigan. But another

man, older and with better technique, had cut in on the romance. Only afterward did Wister come to believe that he could probably have gotten her anyhow, if he'd made a real try. But he was young and bitter and—Oh, well.

HE straightened from Jim's bed. A picture of a spaceship blasting off caught his eye. He'd hoped the kid actually would stick by every small boy's dream and go in for a NASA career. "My son the astronaut." So why not? "My son the first human being to walk on Titan beneath ringed Saturn." Thinking of the *Yankee*, Wister was suddenly not quite sure. A coldness touched him; his fists closed together. There had been deaths in space before today, some of them pretty nasty. But Cy and Phil and Bruno were the men with whom he would like sometime to sail the route of Odysseus.

Quickly he turned on his heel, went down the hall and out the front door, shrugging into his topcoat. The eastern sky had turned pale and the suburban street lay clear to the eye, empty, altogether silent except for a dry rustle of palm fronds in a breeze. Westward there still dwelt gloom and a scattering of stars. The Moon was down. Wister was glad of that. He would not have been able to look on it without a shudder.

He got into his car, growled the engine while he lit his first cigaret, and started off. It was pleasant driving this early, at least, with no traffic jam to buck. Though he liked the neighborhood he lived in, he often wondered if it was worth the commuting. Ninety minutes a day made seven and a half hours a week, fifteen complete days a year, gone from his life with nothing to show for their passage but a stomach ulcer. . . . He turned onto the coast highway and opened up the car.

His forebrain began to worry the problem of what had happened, out there in space. *Yankee* had been on a fairly routine mission, part of a series of tests and shakedown flights before starting for Venus. While it circled the Moon, some data were gathered, of course, for the different breeds of scientists to chew on. But nothing very new. All right, so it had taken a meteorite beating, improbable though that was in the emptiness yonder. But then why had it been abandoned? And especially in a solar flare season!

Wister tried to suppress his barren speculations. He'd need a well-rested mind when he actually began work. He made himself watch sunrise, huge and silvery across the ocean, and recall days on those wide beaches when he walked hand in hand

with Florence and told her everything he was going to do in space. He'd figured there was an excellent chance of his being tapped for the Mars expedition—well, damn it, there had been; he'd not transferred from the astronautical corps to the ground offices at anyone's request but his own—He realized he had gripped the steering wheel so hard that his fingers hurt and had tramped the gas pedal down to the floorboard. "Stop that, you idiot!" he barked aloud. "What good are you to anyone if you smash up?" Shaken, he eased off the pressures.

AFTER a while the sprawling complex of Base came over the low horizon at him. An Aeolus three-stager towered in a gantry, stark against heaven. It was scheduled for a Lunar supply mission next week. Wister had already dismissed a passing thought, that it might be used to save the *Yankee* men instead. Countdown couldn't be advanced more than 48 hours or so, and that wasn't enough.

The guard waved him past without inspection. The young face was strained. *He knows*, Wister realized. *The whole layout here will know as soon as people arrive for work. Then the whole planet. If we can pull off a rescue, with the world's eyes on us, we'll all be set for at least one*

*advancement in grade, and— But those are my friends up there!*

The parking lot was still almost deserted. Wister jumped from his car and jogtrotted to the front door of Think Hall, as everyone had lately been calling the computer-full building that housed Orbital Command. Inside, the corridor was unpeopled, a cavern that went on and on like something in a bad dream, clattering beneath his shoes. He was panting a little when he reached Charlie Huang's office.

It was blue with smoke. The boss was there, of course, pacing tiger fashion. Harry Mowitz, the chief computerman, sat drumming his nails on a chair arm. Bill Delarue, head of communications, perched on the desk. He kept shifting his position. Half a dozen subordinates hovered unhappily by the far wall.

Huang spun about as Wister came in. "Ah," he snapped. "There you are. What the devil kept you so long?"

"Are they still alive?" Wister retorted.

"I hope to Christ so. But they've passed behind the Moon, out of radio reach. Camp Apollo will try to raise them when they come back around in half an hour. Hawaii's standing by too."

"Oh, so you've got their orbit?"

"Well, no. Not exactly. But

their last regular message said they were about to assume it, and of course we know how they planned to park in relation to the *Gal*. That was an hour before they got hit."

Wister considered the situation. *Galileo*, the unmanned Euratom research satellite, was currently circling the Moon in a four-hour orbit, its instruments telemetering some astrophysical observations and recording others for analysis the next time it was brought down to Camp Apollo. *Yankee* was supposed to take up a path of slightly less radius in the same plane. Radar and laser transmissions, back and forth between ship and satellite, would provide data from which the exact shape of the Moon could be more accurately calculated than hitherto. There was close cooperation between the American and West European space programs. . . . Yes, Enwright's boys would have been engaged in terminal maneuvers, jockeying themselves into the right position, when the smash came.

I HAVE an idea how they got hulled," Mowitz offered. "Space can't be quite as hollow as we believed. We know that none of the charted rock storms are anywhere close. But what do we know about meteorites traveling outside the ecliptic plane?

They'd zip by Earth too fast to be observed, if no one was looking for them especially."

"What happened, though?" Wister demanded. His mouth was dry. He went to the water cooler and tapped a Dixie cupful. "Why leave the ship, even if the rocks made scrap iron out of it?"

"The ship caught fire," Delarue said.

"What?" Wister didn't think he had heard correctly. "In space?"

"Yeah," Huang said. "Their last message—short-range 'cast on the only radio left, but Camp Apollo monitored it—uh, here's a copy—'Struck by large meteorites. Fire swept through ship. Forced to escape in ditching capsule. *Yankee*. Over.' " He raised almond eyes loaded with misery. "They didn't have a hell of a lot of time, it seems. I imagine only their being in spacesuits saved them. While I was on my way here, Apollo sent us a new item. Somebody there got a telescopic glimpse, the last few seconds. Said the ship was one long flame. Then it exploded."

"Oh." Wister took out another cigaret. Blindly staring before him, he populated the wall with engineering diagrams and differential equations. The answer appeared. "I see what must've happened. The combustion chamber and tanks were hit. The fuel and liquid oxy ignited—"



"Impossible," Delarue said. "The moment anything like that occurred, rocket blast would cease. Obviously! Then you'd be in free fall, and everybody knows you can't have a fire without weight to give a pressure-temperature gradient."

"You sure can, pal," Wister told him, "if colloidal drops of fuel and lox are scattered through the entire hull. Call it a prolonged explosion rather than a fire if you want to. I agree the free fall effect would dampen the speed of the reaction; but by the same token, the ship would be ablaze for a few minutes. Then an unpunctured fuel tank blew up, and that was that."

"But how'd your mixture get dissipated through the ship in the first place? What formed the colloids?"

"Supersonic energy. A meteorite of a few pounds' mass, zipping through a hull filled with air, would generate the granddaddy of all sonic booms. You use supersonics to homogenize milk, don't you?" Wister shrugged. "If you know a better 'ole, go to it, But I think a detailed mathematical analysis will bear me out."

He was not unconscious of their respectful gaze upon him as he lit his cigaret. Orbital Command was damn glad to have an ex-space pilot on its staff, with everything that that im-

plied in the way of training, practical experience, and an ability to grasp the curious ways that natural law can operate beyond Earth's sky. He had long felt sure that he'd get the section when Charlie Huang moved on up the bureaucratic ladder. The suggestion he had just made wouldn't hurt that prospect any. It would influence the design of *Yankee's* successor.

To hell with that! There must be a way to get them down!

"What's the solar flare prediction?" he asked.

"Uncertain as usual," Huang said. "Solar meteorology has a long ways to go before it's an exact science. However, we all know this is a bad season, and the last report predicted considerable disturbances within 60 hours. That's about 48 hours from this moment."

SILENCE fell on the room and pressed inward. There was no need to review the facts, but they streamed idiotically through Wister's consciousness anyhow. A flare on the sun emitted a stream of protons. Since the *Yankee* had been intended for the Venus expedition, it had been equipped with Swanberg screen generators, whose magnetohydrodynamic forces were adequate to deflect any such bombardment. But a ditching capsule was nothing except a thin metal shell

tucked into the ship's nose. The interior was heavily padded, there were seats and a radio and tools and cables and such oddments. If a vessel coming in through the atmosphere should fail—it had happened to a Russian job once, when the inflatable gliding surfaces ripped open—the pilot was supposed to use an ocean for his landing pad. A small explosive charge would spring the capsule loose from the ship, and it would float about with the crew until someone arrived to pick them up.

It was not meant for space. Under ideal conditions, it would keep three men alive in the void as long as their air held out: four days, Wister estimated, knowing what part of the vessel's supply was stored there. The intrinsic shielding was poor, but would serve for that length of time—unless radiation got very heavy. Which it would when the sun flared.

Four days max, then, to get them to safety. But more likely two days, or less, because of solar weather. No American craft could be readied on such short notice. But. . .

"Euratom," Wister said.

"You mean, have they got anything which could get upstairs in a hurry?" Huang asked. "I checked with Geneva, and the answer is no."

"Well, the Russkies!"

"Gail's put Washington onto that," Huang said quietly. "They're trying to get hold of Karpovitch in person."

Wister bit his lip, embarrassed, and stubbed out his cigarette.

A junior computerman cleared his throat and inquired, "Pardon me, but why can't *Galileo* pick them up? I mean, it's remote controlled, and fueled for a Lunar landing, and passes quite near the capsule at conjunction."

"And has a net mass of about two tons," Wister explained, "which three men in spacesuits would increase by something like 20 percent. Not to mention the uneven distribution of their mass on the shell, which'd royally louse up control and require continual correction blasts. The rocket motor hasn't that much reserve. In fact, *Galileo* carries almost no spare fuel."

"Why not?" said the young man indignantly.

"Because it lands and takes off from the moon. Do you know what fuel and lox cost per gallon, after you've shipped 'em from Earth to Camp Apollo? It'll actually be cheaper for Euratom to lose an occasional unmanned job for lack of emergency tanks, than to tote so much extra mass around *and* replace the liquid every few weeks because of boil-off."

"Dick knows," Huang said.

"He's our local expert on the subject. Was on the team which inspected the *Gal* last year, after G. E. built it for Euratom. He worked with our own similar project before that, between the time he left the astronautical corps and came here to Orbital."

"I see," said the young man.

WISTER smiled reminiscently.

Those had been two great weeks in Europe. He'd intended to wander about afterward on the Continent. Leave of absence was easy to arrange. But Flo fell sick again at that time. Nothing too serious. It never was. However, her poor tattered nerves went completely to pieces when she was ill, and without his father around, Jim would bear the brunt of it . . . just when he was starting to overcome his bedwetting and nightmares . . .

But this had nothing to do with three men in a shell hurtling around the Moon.

Another couple of subordinates arrived. Huang nodded. "That makes a full enough complement," he said. "Take over, Harry. Prepare your team to compute whatever needs computing. The orbit first, I suppose, as soon as we get a fix and a Doppler reading."

"Check." Mowitz beckoned to his staff. They moved out the door and down the hall in a silent, shuffling herd.

Delarue rose. "I'd better get on to my own section," he said.

"Why, they're already standing by, aren't they?" Huang answered. "They don't need you."

"Yeah, but I need them," Delarue muttered between his teeth. "I can't sit here and do nothing!" He left at a quick, jerky pace.

Alone in the office, Huang and his second in command stared at each other. The tobacco haze stung their eyes. The morning sunlight on the parking lot outside was indecently bright.

"Do you really think the Russians will help?" Wister asked after a while, merely to break the silence.

"Oh, yes, if they can," Huang said. "Propaganda kudos for them, isn't it, if they bail out the Americans. Besides, they're human too, whatever you think of their government."

"But are they able? Have they got anything that close to go, right now?"

"Who knows?"

The silence came back. It must be very still in the capsule, Wister thought, remembering his own past missions. Locked in their spacesuits, jammed so close together they could hardly move, the three men would hear little except their breath and heartbeat, see little except a few chill points of blaze in the one tiny port. They could talk to each

other by helmet set, of course; but what do you say to the one beside you as you fall helpless over the night side of the Moon? What do you say down on Earth?

A buzzer sounded. Huang started so violently that he knocked an ashtray off his desk. Cigaret butts spilled halfway across the floor. He stabbed the intercom button. "Yes, what is it?" Wister realized that they were both on their feet, crouched over the black box. His back between the shoulderblades ached with tension.

A woman's voice, from Delarue's team, said, not quite steadily: "Contact has been made with the capsule, sir, via Camp Apollo and Hawaii. We can plug you in directly if you wish."

"Yes, yes, what do you think I wish?" Huang yelled. The intercom clicked and hummed. It crashed upon Wister that he had nothing to say to the men in space. Not one damn thing.

Static crackled from the speaker. Faint and distorted, wavering along the edge of audibility, there came: "Enwright speaking. Hello, hello, are you there, Charlie?"

"Yes—" Huang stared across the box at Wister. "Take over, Dick," he mumbled.

**A**RE you okay?" Wister heard someone ask with his throat. He remembered he must wait: two and a half seconds while the

beam crossed nothingness and came back. Nearly half a million miles, with atmospherics and Doppler effect and the dry hiss of the stars to battle along the way. The tiny, unreal voice said:

"Yeah, I think so, except Phil seems to have ruptured his eardrums. That was a lulu of a detonation. We barely made it to the capsule and sprung her free. Everything worked fine, though." A hesitation. "So far."

"What—uh—air? Temperature? CO<sub>2</sub> control?"

"We're still alive," Enwright said bleakly.

"And we . . . we're figuring how to get you down." Wister had to swallow a couple of times before he could continue. "We're looking for a vehicle."

Whining stillness again, until another tone said: "Bruno speaking. Don't hand us that guff, Dick. You know there isn't any standby. You were a spaceman too."

Once, Wister thought.

"The best thing you can do is get Cy's wife and Phil's girl on the line," Fellini said. What might have been a chuckle sounded from the black box. "Me, I'm lucky. I haven't got anyone who makes that much difference."

*And I've got someone who makes too much difference, Wister thought; so I had to quit space, and the sun will warm my*

*skin while it kills you. So I'm luckier, oh, yes.*

"Stow the dramatics, Bruno," Enwright said. Cohn, sealed in deafness, must needs hold his mouth. "They're doing all they can at Base. This is what we collect flight pay for. Dick, what can we do ourselves? I know you're taking observations to figure our orbit, but is there anything else you might need data on?"

"I . . . I can't imagine—What do you see through your port?" Wister asked.

"M-m-m . . . we're tumbling, naturally, so the stars waltz by in the craziest way. I've timed our rotational velocity as two-point-three R.P.M., though precession louses up my figuring some. Whoops, I just glimpsed the dawn line of the Moon. Mountains like teeth, shadows half-way across a gray plain, Judas, what a graveyard!—Hold it. Had to cover my face there, a sunbeam. . . . I see a piece of wreckage trailing along, in almost the same orbit as us. A double tank—yeah, compressed air, as far's as I can make out the color code in this damned shifty light. The main air tank. Seems intact. Must be, come to think of it, or the gas gushing out would've pushed it into a radically different orbit. The rest of the ship is scattered from hell to breakfast."

"Wait a minute," Wister chattered. "You have flexible cable, I know. Two miles' worth, isn't it? Why don't you go outside, jump and jet across, and make fast to that tank? Pull your capsule alongside it?"

"Why, I guess we can. 'Druther wait till we're back in the Lunar shadow cone, though. It's awfully hot and bright out there. Not that we couldn't stand the heat. We can even take a few hours of the radiation outside this shell, at the level my meter's registering. But frankly, we're uncomfortable aplenty as is."

"Sure, that's okay. Wait for shade."

"Why do the job at all, though? We certainly can't land on a jet of compressed air!"

"Oh, no, no. But extend your breathing time—"

FELLINI'S laughter rattled. "We've got enough here to last us till the sun flares," he said.

Wister's nails dug into his palms. "Anything may help," he said. "I can't imagine how, in this case. Probably it's no use. But you can't afford to pass up any bets." Savagely: "You're dead, you know, unless one of those few bets pays off."

"Dick!" Huang cried. "That was uncalled for."

Static jeered. Then Enwright's ghost-voice said: "He's right, Charlie. We'll secure that tank as



soon as we get behind the Moon again. It won't drift too far from us in a couple of hours."

"It'll alter your orbit some. Must have more total mass than you and your capsule do. The momentum exchange—" Huang slumped. "Never mind. We can recompute. Okay."

The speaker hummed and sputtered.

"What else do you want to know?" Enwright asked.

"I can't think of anything," Huang sighed.

"We'll sign off, then. That is . . . till you put us in touch with our people."

"Sure. As soon as possible. Meanwhile, uh, uh, would you like some music?"

"No, thanks. Not with reception like this, eh, Bruno?"

"I think I would, if you've got some classic jazz," Fellini said. "None of the current slop, though."

"Oh, well, I can stand it," Enwright said. "Thanks for everything, Earth and Apollo. *Au voir*. Over and out."

The voice died. Presently the intercom stopped crackling. Delarue came on: "We'll hold a monitor on them, of course. Say, want I should arrange that music? I've got his kind of tapes at home. Jelly Roll Morton and so forth."

"Sure," Huang said. "Fine." He punched for Mowitz's section.

"Harry? How're you coming on the orbit?"

"We're processing the data now. Ought to have the elements for you inside 15 minutes."

"No hurry, I'm afraid. Especially since you'll have to recalculate next time around. They're going to attach to an extraneous mass. But carry on." Huang turned the instrument off and rose to his feet. Suddenly he looked old. "Can you hold down the fort for a while?" he asked.

"Me?" Wister replied, startled. "Why, I suppose—But what —"

"Somebody's got to notify those women and arrange a hookup."

Because he knew that Huang knew it, Wister must needs say: "I'm a personal friend of all concerned, Charlie. I can do that."

His relief was unabashed when the other said, "No. I've no right to delegate the hard ones. It'll be a little easier for me to tell 'em anyhow, a comparative stranger. And—" Huang paused—"you're better qualified to handle this desk in this kind of situation than I am. I'm only an orbits man."

HE went out. Wister sat down in his place and stared through the window. *All right*, he told himself, *now what?*

*Now the death watch, that's what*, he answered. *I'd better see*

*about some transportation for Flo to go shopping. I'll be stuck here till it's over. (Why won't she learn to drive? She may not be very strong, but she isn't paralyzed. Could it be my fault? Maybe I should have been tougher with her when—Or maybe not. How can I tell? Too late now.) The hell with expense. I'm sick of begging favors from the whole neighborhood. Let her take taxis. (I shouldn't have to worry about expense with my salary, even if I don't get flight pay any more. But doctor bills, and a cleaning woman three times a week, and —) Stop that whimpering! You're alive, at least!*

Then the intercom buzzed and he forgot about it. Gail Jackman's voice said: "Mr. Garth calling from Washington. Can you take the message?"

"Sure can!" He snatched the phone. "Hello, Richard Wister speaking, Mr. Huang had to go out, he left me in charge."

"Tom Garth," said NASA's liaison with the State Department. "We got the word from Moscow."

"Yes? Can they—"

"No. I'm sorry. Karpovitch talked to me himself. He said they can raise a Gagarin-class ship inside a week, but I told him that was no use. Right?"

"Uh-huh. We're closer to go than that ourselves."

"No hope, then?"

"We're trying to think of something."

"Better call a conference. We'll hold a brainstorming session here and let you know what we come up with. This could give us all a black eye, propaganda-wise."

Wister became unable to bandy clichés. "I'd better hang up," he said. "Plenty to get organized here, you know. Thanks for calling. So long." He clashed the receiver down.

His ulcer stabbed him. Wincing, he pushed the intercom button. "Gail, could you promote me some crackers and milk?"

"Yes, with pleasure," said Huang's secretary.

"Uh . . . get yourself something too, if you want. I daresay you didn't have a chance for breakfast either. Frankly, I'd like someone to talk to. Help me forget for a minute how useless I am."

"I understand," she said gently. "I'll send an office boy right away."

HE waited, stewing over the emptiness within and without, until Gail entered carrying a tray. Then his shirt lifted a trifle. She was pretty—not spectacular, but pleasant to look on, intelligent, cheerful, and uncommitted. Sometimes Wister daydreamed about having an affair with her. It wasn't as if that

would deprive Florence of anything she cared about any longer. But since Gail knew he was married, he had never quite figured out how to make the initial move. As she set the food on the desk, sunlight running along her burnished hair and striking through a thin blouse, he wondered if perhaps the intimacy of this moment—No, he was only supposed to think about Cy, Phil, and Bruno, wasn't he? Nonetheless he made a ceremony of seating her, and they exchanged smiles.

"Thank'ee, Sir Walter," she said.

"Raleigh, 'tis a pleasure." Bitterness surged in him. "Excuse me. I know I'm being sophomoric. But what can we do?"

She regarded him gravely. "You're taking this hard, aren't you?"

"Yes," he said, quite sincere, though not unaware of the dramatic possibilities in his role. "Aren't we all? Those are us in that capsule."

She shook her head. "You're a man. But a woman thinks differently. Oh, of course I pity them, and I'll bawl as soon as I go off duty. Yet I keep thanking God it isn't my man up there."

Wister gulped at his milk. "Don't get me wrong," he said. "I'm no hero or any such foolish thing. But I'd give—what? An eye or a hand—for a chance to save them."

"I think you mean that literally," she murmured.

"I do." He couldn't remain in his chair, jumped up, walked to the window and stared out at the bland blind sky. "What makes it especially tough is having been a pilot myself. I know what it's like for them. Suffocating hot, each time the sun beats on the shell. Clothes plastered to your skin with sweat, that runs into your eyes and stings, but you can't rub them, and you itch but can't scratch, and whenever you notice your own stench you gag. You're a bit sick anyway, from the tumbling of the shell. It doesn't give much weight, but the gradient is so steep that every time you move the weight shifts, your middle ear protests, and you feel nauseated. And that breaks down your mental defenses. The instincts of a trapped animal yell louder and louder. You sit there waiting for the sun to spew out your death—" He realized what he was saying. "Pardon me."

"Go on," she said. Tears blurred her eyes.

"Furthermore," he said, "I can imagine myself all too clearly, outward bound to rescue them. Piloting's a more cerebral thing, though. Push that button, pull that lever, set that wheel; a problem in mathematics, really, which you act out, too busy to be afraid or uncomfortable. *Doing* some-

thing, before heaven, instead of —”

He stopped. For a very long time he stood altogether motionless.

“What’s the matter?” Gail rose, half frightened.

Wister turned about. His eyes raked her without seeing. He spoke in a stranger’s tone: “Put me through to Geneva.”

“Why—”

“Jansen in Geneva. Head of the Euratom space project. I want to talk to him.” Wister ripped open a drawer, found Huang’s slide rule, sat down and reached for the handbooks on the desk. He had forgotten she existed.

*STEADY as she goes.”*

The satellite drifted nearer, an ungainly spindle, tiny across the miles, against the cold curdled Milky Way. The sun, hammering on Enwright’s back, struck its surface. Hard painful splinters of light rebounded to his eyes. He slitted them and made himself ignore the discomfort. Overtaking the *Galileo* on its slightly smaller orbit, the *Yankee* capsule headed toward the darkness behind the Moon. That pocked gibbous shape loomed enormous to the right. His heart thuttered.

“N-no . . . wait . . . reduce speed a few feet per second more.”

The satellite’s clustered rocket tubes blasted momentarily in opposition to the course. A white cloud, tinged with fire-streaks, billowed ahead, expanded, and whiffed to nothing. *Galileo* fell a couple of miles closer to the Moon. Actually, some velocity was gained thereby, since the Lunar gravitational pull grew stronger. But relative to the capsule, speed was lost. And there would be a shorter distance to jump, Enwright gauged.

“Okay, I’m off.”

He crouched on his toes, where spaceboots lacked the slight stickiness that otherwise held him to the hull. His legs straightened and he soared free. The cable unreeled behind him. Moving at about a dozen feet per second, he took several minutes to go from capsule to satellite. The gap started to widen as he neared, for the orbits were not yet identical. But Enwright had a spaceman’s sense of vectors. He had led his target as a hunter-leads a duck, and passed within yards. A short blast from the air bottle in his harness corrected the remaining error. The bulky shape, bristling with robotic instruments, swelled before him. He twisted about, somehow acrobatic in his spacesuit, and hit feet first. The slight shock traveled through his spine to rattle his jaws. Changing rotations dizzied him. He made fast.

Turning, with one hand to shade the sunside of his helmet, he saw the capsule and the other men who clung to it. Hastily he secured a bight of the cable to a sturdy-looking bracket, then braced himself and began hauling.

Cohn and Fellini toiled at their end. Slowly the two masses moved together, until at last they bumped in contact. The spin characteristics of the system grew utterly mad. Enwright plugged his radio back into the capsule's transmitter. "Okay so far. We're all in one piece now. But is there still fuel enough?"

"Oh, yes. The Gal didn't have to shed much velocity. We're about to lose contact again, you know. Think you'll be ready by the time you come back around to our side?"

"Roger. Over and out."

THE sun fell behind the Moon's ragged shoulder. Bailey's Beads flashed momentarily, then only a wing of soft coronal light was to be seen. It set also. But the crowding stars gave sufficient illumination, and the coolness was a blessing. Their space-suits were barely able to keep the men going under full sunlight. The chill of the shadow cone meant little for the brief time they were in it; their own hard-working bodies replaced radiated heat.

Hard-working indeed. They had two hours to dismount the capsule's radio transceiver and fix it securely on the *Galileo*; unship the huge air tank from the capsule; lash it even more strongly to the satellite; release the capsule itself, no longer needed, to drift free; and tie themselves around *Galileo's* circumference in such a way as to cause minimum unbalance.

"Think we'll make it, Cy? Be honest, now."

"How can I tell? But we haven't much to lose, have we?"

"I'll answer that question when we're down."

The sun struck them with such cruelty that they wondered if flare radiation had begun to sleet through their bodies. Voices entered their helmets.

"Base to Yankee Gal. We've nailed you on our radar. Are you prepared to go?"

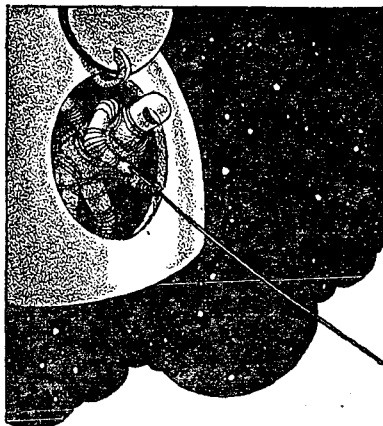
"Hope so. But don't you want to compute our new orbit first?"

"Why? You'll be leaving it right away, and in a totally unpredictable fashion."

"I'm not thinking straight any more. Lord, but I'm tired!"

"Nothing that some bed rest and a pretty nurse won't cure. Your roentgen background is still tolerable. But the solar meteorologists now expect a flare within five or six hours, so let's get you down fast. Just a minute while I settle myself."





*"Dick, how come you're controlling Galileo? Wouldn't one of the Europeans have more experience?"*

*"Ordinarily, yes. I'm not doing this for fun. But the trouble is, the handling characteristics must have been radically changed by the added masses. Jansen strongly recommended we use a man with some seat-of-the-pants background as well as a knowledge of this particular telecontrol system. Well, I did pilot some awful boltbuckets, not too many years ago. And the control room here at Base is practically the same as the one in the Midi. G. E. built 'em both, you know. I . . . think I've familiarized myself with Euratom's operating codes, while I waited for you."*

*"I know you have, Dick."*

*"If I should crash you—No!"*

*"You won't."*

*"Okay, then, let's go. First we*

*have to re-orient your main axis. Get it tangential to orbit. Hang on! Over."* The clumsy mass spouted and slewed about. *"Whew! My instruments say you're lined up. But the whole damned system wants to hunt. Crack that barrel fast!"*

Enwright reached across to the tank beside him. The main release valve had already been loosened. It turned readily. He felt a surge of thrust as the air poured out. The deep-throated roar vibrated his bones.

In a few minutes the great container was exhausted. Enwright, Fellini, and Cohn worked frantically to release it. The light, flexible cable had strength comparable to steel, and deceleration pressure had tightened every knot. Panting, cursing minutes fled while tools hung at belts worked away. Freed, tank and satellite moved ponderously apart under the force of rotation.

*"Yankee Gal to Base. We're clear. Repeat, we're clear. Over."*

*"Base to Yankee Gal. As near as we can gauge, you've lost virtually all orbital velocity and are falling fast. There's a wee bit of forward speed to kill, but then —"*

**THRUST** and thrum awoke where fire-tongues wavered. The satellite tilted about, obedient to pulses sent across a quarter million miles, but awkward,

crazily a-wobble. The Moon's disc grew at a terrifying rate. Deceleration gravities pulled blood from men's nostrils. A whirlpool sucked consciousness downward.

Dust flew up from the Lunar land, driven by the rocket stormwind. *Galileo* inched through sudden night. Radar felt ahead, signalled altitude to the operator; but where he sat at the board on Earth, his knowledge was more than a second behind the truth.

Somehow he balanced the forces. A yard above ground, the satellite hung with zero velocity. A little fuel was left, but he cut the motors rather than tempt fate. A yard is not far to fall under Lunar gravity. Even so, *Galileo's* weight crumpled the tail assem-

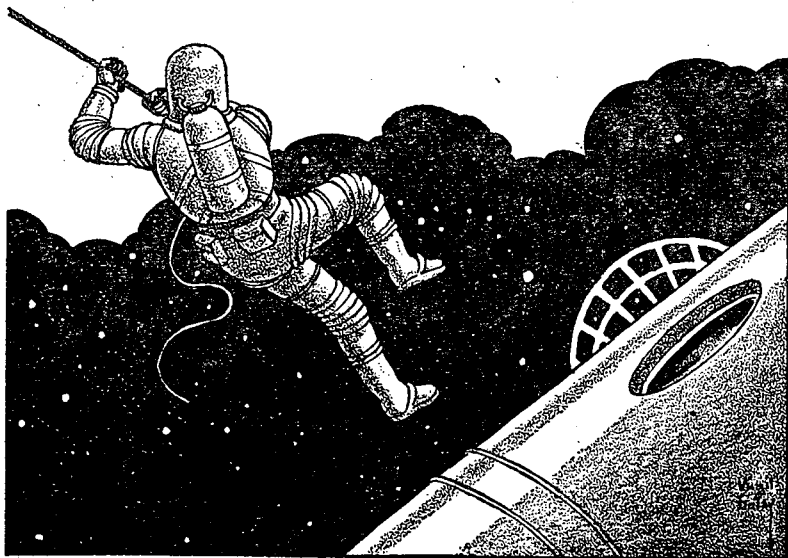
bly like paper. But the shell did not topple, it did not topple.

Slowly the dust settled. The sun, near the horizon, flung long rays over a scored and barren plain. Three shapes, lashed to the wreck, stirred and called each other's names.

*"Base to Yankee Gal. Base to Yankee Gal. Come in. Do you read us? Are you all right? Come in, for mercy's sake!"*

*"We . . . ugh . . . Bruno, Phil—Yes. We're pretty much okay. A couple of broken bones, I think, but no serious bleeding, so what the hell. You even put us down in the shadow of a crag."*

*"You're a bit southwest of the Rhiphaeans. One minute, please—Yes, they have an exact fix on you. A hopper has already left*



*Camp Apollo. You'll be in the hospital inside three hours."*

*"Thanks for our lives, Dick. . . . 'As the shadow of a great rock in a weary land—'"*

WISTER let go the controls as if the skeleton had dissolved from him. He sagged back in his chair, hardly noticing those who crowded near and shouted.

Gail Jackman dropped the cloth with which she had mopped his face as he worked. It was drenched. She sank to the floor, hugged her knees, and burst into tears.

Huang pushed through the mob with a fifth of Scotch. Wister drank deep. A measure of strength returned. He got up, hunkered down, and patted Gail on the shoulder. "Why, everything's fine now," he whispered.

"I'm sorry," she gulped. "It was so—How did you do it? I'd heard there wasn't enough fuel to do it. I couldn't understand what you were trying, b-b-but there wasn't time to ask. . . . The way you sat there—somebody had to—"

Wister blinked. "Oh, that," he said tonelessly. There were too mucking many people around. "Dumb luck. The big air tank. Mass nearly equal to the capsule plus men. That much expanding gas, heated by the sun, should be able to kill most of the satellite's orbital velocity. In a four-

hour track around the Moon that's, uh, about eight-tenths mile per second. Which is over 50 percent of escape velocity, or 35 percent of the total speed it has to shed for a soft landing. With 35 percent of the work done almost free, there should be enough fuel to set down a 20 percent greater mass, even allowing for the extra maneuvers necessary. Shouldn't there be? Dumb luck."

He straightened and shuffled from the room, Huang clearing a path for him.

"Can I have a few days' rest?" he croaked when they were alone in the hall.

"Take a month if you want. I'll get somebody to drive you home now. I'm still too wrung out to do it myself."

Somebody had hung Wister's coat in his office. As he entered to get it, the phone rang on his desk. He laid the receiver to his ear. Florence's voice said, "Dick? I've been trying and trying to get hold of you. Did everything work out good?"

"Yes," he said.

"That's wonderful," she said politely. "Darling, I'm so sorry, but I didn't hear the alarm. You remember you left a note for me to get Jimmy off to school? Well, I slept through the alarm and woke up feeling so terrible—"

"Never mind," he said. "I'll be home in a little while."

THE END

AMAZING STORIES

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# the YOUNG OLD MAN

By EARL L. BELL

Introduction by Sam Moskowitz

**I**MMORTALITY is one of the oldest themes in science fiction and probably in all literature, possibly because of the fascination it holds for a human race confronted at all times and in all places by "a realization of mortality." The most profound influence on the literature of immortality has been the legend of the Wandering Jew, who, according to myth, was a porter to the Romans named Cartiphilus and is reputed to have struck Jesus after sentencing by Pilate, urging him to move faster. According to legend, Jesus turned to him and said: "I am going, but you shall wait until I return."

Tales of the Wandering Jew have become so sizeable a portion of literature that they have inspired an entire book by Joseph Gaer on the subject of The Legend of the Wandering Jew, pub-

lished in paperback by New American Library in 1961. Stories of the Wandering Jew still appear in modern science fiction by modern writers as prominent as Nelson S. Bond, Wilson Tucker and Walter M. Miller.

However, more common are tales which are an outgrowth of the Wandering Jew legend, but whose approach has been altered so that one has to scrutinize carefully for identification. Today, we frequently find the very long-lived possessor of strange powers in the guise of a virtual hillbilly or alien, confounding the scientists and civilization with his unusual talents.

Gramps Schneider in Robert Heinlein's *Waldo* is of indeterminate age, but unquestionably very, very old since he still has posters extolling the virtues of "free silver" in his cabin and

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*the story takes place in our future! Clifford D. Simak in Census tells of a youth who is living in the backwoods, 163 years old and barely adolescent! Murray Leinster's Strange Case of John Kingman is the furthest advanced from the Wandering Jew legend, wherein an inmate of an insane asylum lives on and on endlessly. All these characters have two things in common. They are exceedingly long-lived and they have supernormal attributes.*

*The Young Old Man by Earl L. Bell deserves printing on the basis of intrinsic merit alone, but beyond that it deserves recognition as the transition story in the science fiction magazines between the ancient legend of the Wandering Jew and today's outgrowth of the theme as utilized by Robert A. Heinlein, Clifford D. Simak and Murray Leinster.*

*The immortal in Bell's story is not the Wandering Jew but he recognizes his affinity to him.*

*He is a man of strange personal qualities and powers who resides in the primitive Ozarks. Unlike the modern writers, Bell is neither afraid or unable to reveal the origin of his "immortal" and his explanation is worthy of special discussion except that it would reveal his punch line. The device he utilizes in his ending was so effective that it was picked up by Manly Wade Wellman for the "socker" in Twice in Time.*

*In the canons of science fiction, Bell is known to have contributed only two stories. In addition to The Young Old Man, his short novel The Moon of Doom led off the first issue of AMAZING STORIES QUARTERLY and was outstanding for its originality of ideas, but spoiled by excessive compression.*

*The contribution he made to the development of modern science fiction, in The Young Old Man has received no direct credit until now.*

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**WE** MET the Young Old Man—Glenn Fleming and I—during our first camp-out in the heart of the Ozarks.

A cloudburst that sent the rain through the roof of our shack had ruined our cache of rations, and we decided to replenish at the nearest settlement, some ten miles distant.

Our rickety car managed to carry us safely over the make-shift mountain roads, and we found that the settlement comprised only five or six scattered houses and one store, a typical cross-roads affair, whose front bore numerous patent medicine and cut-plug advertisements amid which could be discerned





I tried to free myself, but the devils in the wires were too cunning.

THE YOUNG OLD MAN

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the lettering: CLINTON FANCHER  
—GENERAL MERCHANDISE.

Quite traditionally, the proprietor was sitting on a soap box inside the store engaged in the ancient art of whittling when we entered. There was something about him that focused our attention immediately he rose to greet us; and when he spoke, we knew he was no ordinary hill-man.

"A particularly fine day after yesterday's deluge, my lads. One of the heaviest rains these old hills have had in more than a decade. What can I do for you?"

In spite of his inordinate quid of tobacco, his articulation was perfect, but there was an alien quality in his voice that was baffling—a slight but peculiar accent that defied definition. His English was good, but it hinted of other tongues, a combination of them, in a most cosmopolitan sort of way.

Queer, that voice of his, but his appearance was even more bizarre. I remarked him closely as he was filling our order and noted that Glenn, who had strolled over to the counter and picked up a book that lay by the cheese box, also was studying him.

There are men who are old for their years, and men young for their years, but there is always some clue—the eyes, as a rule—that enables one to come within ten years of their correct age, at

the outside. But not so with the man before us. I first thought he was no more than forty. Then, noticing his graying hair and slight flabbiness of muscle, I guessed he was about fifty. But when I found opportunity to look closely into his eyes, I received such a shock that I wanted to shudder.

Set in a face almost youthful, they were ancient beyond reckoning, as are the Ozark hills.

Dewlapped, timeworn and sunken. . . . Yet they were not the lack-lustre eyes of senility. There were life and light in them, but of a kind I did not know. Weariness—infinite weariness—was there, and a sorrowful sort of wisdom, as if they had gazed too long upon the Valley of Baca. Still, I repeat, they were not the watery eyes of age. Rather, I fancied, they were orbs such as the Sphinx might have, should she rise suddenly to vigorous life, under doom to remember all. Yes, that was it—the storekeeper's eyes had seen too much, and were unable to forget.

I thought I had managed somehow to conceal my amazement, and was quite certain he had betrayed no embarrassment; but a moment later, none the less, he produced from his pocket a pair of dark glasses and put them on.

Glenn, registering puzzlement, was still thumbing the book when

the grocer finished with our order, and when he laid the volume down, I noticed for the first time that it had no cover.

"Well, boys, I presume you are strangers in these parts," the merchant's enigmatic voice put in, as we paid him and made ready to depart. "And camping out, I deduce."

We introduced ourselves and informed him briefly that we were down from St. Louis for our first stay in the Ozarks, and were "roughing it" at Robin Creek, where the fishing had been very good until the recent rain.

"The water will be too muddy for any catch except catfish until to-morrow, I should say," he commented. "Come to see me again before you leave, lads. I seldom see anyone from the outside. I have been living here twenty years and haven't been ten miles from the hamlet in that time. I guess I'm getting lonesome—and loquacious. Sometimes I find myself looking out upon the hills and talking to them. I've seen nearly all the mountains in the world, boys, and I love the Ozarks best of all. They are so old they seem to be *en rapport* with one who has come to realize the futility of it all. They were once quite haughty hills, you know, but the eons have worn them down. The day will come when they shall be no more. *Sic transit gloria mundi.*"

THE YOUNG OLD MAN

(Thus the world's glory passes.)

"Then I take it you are not a native of this section, and must have traveled quite a bit," I said, hiding my astonishment at his linguistic display.

"You're right, my friend. My natal cry was uttered far from these hills, and I've outdone the Wandering Jew himself in my day. Come over some time and let me bore you with some of my experiences."

And then, to Glenn as we were starting the car: "You must come too, my lad, and I'll tell you about that book, if you'll promise to believe me."

IMAGINE a country storekeeper in this neck of the woods using Latin and reading dog Latin. It's uncanny!" Glenn's voice rose above the rattle of the flivver.

"But not as uncanny as his eyes," I responded. "Did you see them?"

"No, I was too interested in the book. So that's why he put on his glasses?"

"I guess so, and I'm glad he did. His eyes really gave me the creeps. They're incongruous. At once young and old, and there's something odious about them—no, not that, but sadness and weariness so great as to make them repellent. I once read a gruesome tale about the dead-alive, a group of people for whose

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souls life and death fought to a stalemate and finally arrived at a ghastly compromise whereby their victims must live forever in a plight that called for death. Well, I imagine those people must have had eyes like those of our friend back there."

"Oh, wake up, Bill, you talk as though you had seen a ghost or a vampire," my companion chided. "The fellow has some peculiar optical ailment, that's all. But I'd like for you to tell me what he is doing with that book. It's a medieval philosophical work and is written in a monkish sort of Latin that puzzles me. There was no way to tell who wrote it, nor when it was published. The binding and the title page were gone, and the name doesn't appear at the top of the pages as in modern books. It must be hundreds of years old, and is worth a fortune, sure as your name is Bill Semms."

Glenn was a hopeless bibliophile, and I knew he would not rest until he had learned the history of the volume. Therefore I expected him to propose that we pay the storeman another visit, and he did so, before we reached camp. I prevailed upon him, however, to wait until we broke camp and stop by the store on our way out of the mountains.

A VISITOR came to our shack that night, an old mountain-

eer named Harkins who lived about a mile up the creek, and who had paid us a previous call. Long, lean, bearded and rugged, he was a typical backhillman in all save one respect: he was garrulous—to a fault.

"Come down this way this mornin' bout noon to see ef the cloudburst had washed you all away," he said by way of greeting, "and found you-all gone. Reckoned you-all had packed up and hit fer home, but heard your car a-rattlin' over the hills while I was a-crossin' the creek this evenin' (afternoon), so I jest drapped in to tell you-all that the fishin' will be all right again in a day or tew."

"The rain was too much for our roof and ruined the groceries we had in the corner over there," I explained, "so we had to run up to the settlement and buy more."

"Which settlement?"

"I don't know its name. It's about ten miles west of here."

"That's Rossville. So you bought 'em from that Fancher fellow, hey? Pecooliar old chap, ain't he? They call him the 'Young Old Man.'"

Glenn moved closer and handed our guest a cigar.

"We didn't pay much attention to him," I lied, trying to veil my curiosity. "Why do you call him peculiar?"

"Ef you had saw his eyes,

you'd a-called him wuss than pe-cooliar. Guess he had 'em covered up, though. Most gen'ly does, now."

"He did strike us as somewhat unusual," I admitted. "Tell us something about him."

"Well," he began, lighting his cigar. "Fancher ain't a bad sort o' feller—'ceptin' his eyes. Nobody 'round here don't know much 'bout him. He's a mystery. Come to Rossville 'bout twenty year ago and bought out a sto'. He's a furriner, all right, but nobody don't know jest where he come from. Friendly enough, but never would say much 'bout hisself, or 'bout anything else, for that matter. They do say, though, that he's kind o' lossened up here o' late. I ain't saw him in nearly two year."

He paused and stroked his beard.

"But his eyes—what's the matter with them?" I prompted.

"Nobody don't know what in tarnation's the matter with 'em. They was kind o' pe-cooliar when he fust come here, and they been gettin' wusser and wusser ever since. Got so bad 'bout five year ago that the young uns at Rossville thought he was the bogey man and were scairt to go to his sto', even for the scraps o' candy he'd give 'em now and then. He started to wearin' a pair o' big black glasses 'bout that time, and I hyears he's sca-cely ever seen

without 'em now. He can see out o' them eyes o' his'n good as anybody, though."

"Why do they call him the 'Young Old Man'?" Glenn put in.

"I was a-comin' to that. It's mostly 'cause o' his eyes. Ef you had saw 'em, you'd understand. Bet old Methuselah hisself didn't have a set o' eyes any older lookin' than Fancher's. They look like they had saw the flood, the locusts and all them other plagues the Bible tells 'bout. Ef it warn't for that, he could pass for man o' forty-five, easy. And that's the funny part o' it—'ceptin' his eyes, he don't look a year older than when he fust come here. Yes, sir, there's somethin' mighty pe-cooliar 'bout Fancher. But he's a pretty good sort, jest the same, and will do anybody a favor ef he can. The smallpox broke out in these parts 'bout ten year ago, and Fancher closed his sto' and nussed at least a dozen families. Didn't seem scairt at all."

THREE days later we heard the Young Old Man was dead.

Found lifeless in his bed in the room back of his store, according to old Harkins, who brought the news to us.

But the excited Harkins had no particulars. In fact, he wasn't certain the report was true. He had "hyeared" it, he said, and was preparing to go to Rossville

to investigate. "Mought be a murder," he added, morbidly, if not hopefully. "We ain't had no excitement in these hills in three year."

Glenn proposed that we ride over and see for ourselves. I surmised he was anxious about the fate of that book, but what he meant to do about it, if the owner was really dead, was more than I could fathom.

We invited Harkins to accompany us.

The coroner had claimed the body when we arrived, and there was to be an inquest shortly, the agitated villagers informed us.

A few minutes later, after Harkins had lost himself in the crowd, Glenn and I, accompanied by the coroner, viewed the Young Old Man's remains.

It was evident that he had died without a struggle. The body, fully clothed and face up, lay across the bed. His weird eyes were forever closed, yet there was something unearthly about his features—an expression of transcendent joy that centered in the strangest smile I have ever seen on the face of the dead. Not inscrutable, that smile. It told of long-sought surcease of flagellating weariness; of infinite gladness at having laid the burden down.

"I can't understand it," the coroner's voice interrupted my thoughts. "He looks like he is

glad he's dead. A plain case of heart failure, I guess, but I must go through with the inquest soon as the doctor arrives."

The room of death was small and sparsely furnished. The bed, two chairs, a trunk, a table and a small oil stove were about all it contained. An oil lamp stood on the table, and beside it lay a coverless book and the Young Old Man's dark glasses. The walls were bare save for a cracked mirror on one side of the fireplace and what appeared to be a framed motto on the other.

Glenn moved over and picked up the book soon as it caught his eyes.

"This is a valuable volume," he said to the coroner. "I would have given him a hundred dollars for it."

"Well, you may be able to buy it from Preacher Fellows," the official drawled. "I understand Fancher made some sort of a will a few months ago and left the pastor everything he had."

"Where does the minister live?" Glenn asked, eagerly.

"In that little white house over yonder," pointing out of the window to a cottage about two hundred yards away. "Preacher Fellows is a superannuated circuit rider, and is going blind. He was Fancher's closest friend."

Glenn laid the book down reluctantly and walked over to the motto on the wall.

"Come here, Bill, you and the coroner," he beckoned a moment later. "This is interesting."

It was not a motto. It was part of Walt Whitman's chant to death:

"Come lovely and soothing  
Death,

Undulate round the world serenely arriving, arriving,  
In the day, in the night, to all,  
to each,

Sooner or later, delicate Death,  
Dark Mother, always gliding  
near on soft feet,

Have none chanted for thee a  
chant of fullest welcome?

Then I chant for thee, I glorify  
thee above all,

Approach, strong deliveress."

SO YOU want to buy the book?

I don't know its value, but I think the hundred dollars you offer is too much, my son. I'll take it, though, for God knows I'll need it before long. It's a strange volume, isn't it? Fancher used to pore over it all the time, but he'd never tell me what was in it."

We were sitting in the old circuit rider's humble parlor. It was night. The Fancher inquest had been late in starting and had lasted until nearly sunset. The verdict was death from natural causes.

Glenn gave the minister the money and we prepared to depart, but he entreated us to stay

a little longer. It seemed that something was troubling him.

"I'm worried, my young friends," he admitted after a while. "There's something I want to show you. You say you are college men, and maybe you'll be able to help me."

He reached into a drawer of the small table around which we were sitting and produced a large envelope.

"I suppose I should have opened this before the inquest was held," he said, "but was so shaken over my friend's death that I forgot it.

"Fancher made a will shortly before he died, and his wish was that I sell his store and keep the money against the day when these cataracts have finished blinding me. The same day he drew up the will, he gave me this letter. I was to open it on the day he died. I had just finished trying to read it when you knocked at the door. My eyes are so bad I couldn't study it closely, but I read enough to make my reason totter. God knows I believe Fancher was insane when he wrote it—insane all the time—and we didn't know it.

"Here my son," handing me the letter, "read it aloud. I want to know just what it means before I show it to the coroner. I'm just a plain old country preacher and know almost nothing about the things he mentions. But I



pray that Fancher's story isn't true. A suicide's soul—no, I won't say that. Go ahead with the reading, son."

He turned the flickering flame of the kerosene lamp a bit higher, and this is what I read:

THE TRUE STORY OF THE LIFE OF  
CLINTON FANCHER, 1269-1926

I, Clinton Fancher, *alias* numerous other names, being in full possession of all my faculties and having determined to die, write this, my life story, on the day that marks the 657th anniversary of my birth.

Knowing that none will believe, I will be brief. And knowing that the English used by the old friar and myself is scarcely intelligible now, I will be modern.

I was born in the year 1269, in the ancient town of Basingstoke, which is in Hampshire, England.

It was in my twenty-fifth year that I met the thaumaturgist and traded life for *life*.

He was known as the Sorcerer, and I met him near Ilchester, in Somerset, in 1293, the year before he died.

He was an old man of nearly 80 then, and had returned to Somerset, the place of his birth, to spend his last days after a long imprisonment.

The sorcerer was a Franciscan of Oxford, and one of the most famous men of his day. A devotee

of knowledge and a man of science, his renown had spread over most of Europe. He probably did more than any other man toward ushering in the Renaissance. He prophesied the airplane, motor vehicle, steamship, submarine and many other inventions which I have lived to see perfected. His scientific discoveries were among the first ever made by an Englishman. His writings marked him as probably the greatest philosopher since the Greeks.

So great were his accomplishments, that they proved his undoing and made of his life an intellectual tragedy. He had always been considered a rebellious member of the Franciscan order and was distrusted by his fellow friars. At length he was accused of dealing in black art, and finally, when the church condemned his books, was thrown into prison for fourteen years.

He had pursued his writings and investigations while in prison, and it was rumored he had emerged with the formula of an elixir that would enable one to live forever.

I had been ill three years with a disease which was later to become known as tuberculosis. I felt I couldn't live much longer. And I was in love. She was a bonny Hampshire lass with eyes like lapis lazuli.

And that is why I made my way to the house of the sorcerer.

He received me kindly, did this old friar of the broad brow and piercing eyes, whom prison suffering had wasted to a shadow.

"So you would like to live forever, my lad?" he asked after hearing my story. "I wouldn't advise it, even if it were possible. The man who discovers an elixir such as you mention would be the greatest malefactor the world has known. No, I have no such formula. Don't you see, I'd be burned at the stake for witchcraft if what you have heard were true?"

But I pleaded with him to try at least to heal me. I told him of the lass back in Hampshire. At length he promised to dose me.

"Come back to-night, my son, and I'll see what I can do," he said, a strange light coming into his eyes.

THAT light was burning fiercer when I returned. I was almost afraid of him. But he took me by the hand reassuringly and led me into his study.

"There is no drug that will heal you," he said. "You must waste away and die unless—"

"Unless what?" I cried.

"Would you really like to live indefinitely, my son?"

"Yes, forever—forever and a day."

"Yours is the voice of youth," he meditated. "You do not know

what you say. I do not want the stain of a suicide's blood on my soul. The very knowledge that one had interminable life would lead to self-destruction. No, lad, life is usually too long as it is."

"But not for me," I protested. "I am only twenty-four, and must die—die without having lived."

"It is so," he agreed. The strange light in his eyes flared up again, brighter than the ray of the candle on the table between us. "Come with me."

He led me into another room and pointed to a silver crucifix on the wall.

"You are of the faith?"

"Yes, Father."

"Then kneel before the crucifix and swear by all the saints that you will never reveal, while I am living, what I am about to do."

I swore.

When I rose he had opened a cleverly concealed trap-door in the floor behind me. There was a ladder leading to the basement. I followed him down.

The cellar was not more than ten feet square. A table stood in one corner. On it was a sizable black box with wires running from it.

The old friar set the candle on the table and placed a hand on the box.

"I'm not certain it will grant you immortality," he said. "If I were, I would not have brought

you here. But it may heal you, at least. And if it does more than that, may God forgive me."

"What is in it?" I gasped. Had Lucifer and all the hosts of Hell sprung from the box I would not have been surprised. You must remember that it was still the Dark Ages.

"Ah, that I knew what it contains," the old man replied. "But it has no life, as we understand the term. And it cannot harm you, though it may cause you to fall asleep for a while. Are you ready, my son? If so, bare your wrists and ankles."

The seeming necromancy of the proceedings almost paralyzed my medieval mind. Grim fear gripped me and for a moment I wanted to cry out and flee the house. Would to God I had!

That the sorcerer was in league with Satan I had no doubt. And probably he was trying to betray me into selling my soul. No, I told myself, I would have none of it. But at that instant the old man's eyes gleamed once more with that unholy light—hypnotic, I suppose—and my fear subsided.

Stupefied, I began rolling up my sleeves, and when the candle-light accentuated the emaciation of my arms, I no longer hesitated.

The sorcerer must have sensed my decision. He began fumbling with the wires that ran from the

box, and I noticed there was a metal clasp at the end of each of them.

At his gesture I moved nearer the table and he fastened the clasps about my limbs. I fancied his lips were moving in prayer.

"Ready, my son?"

"Ready, Father, and God help me!"

There was a sort of key in one side of the box. The sorcerer gave it a turn.

A thousand fires began racing through my veins. I jerked spasmodically. I tried to free myself of the clasps, but the devils in the wires were too cunning. A sputtering sound was coming from the box, and my horror-dilated eyes beheld small streams of purple sparks issuing from the holes where the wires emerged. In spite of my pain, I was fascinated. I had never seen fire so beautiful, I thought, and thinking, lost consciousness.

I WAS stretched on the cellar's earthen floor when I revived. The sorcerer was bending over me solicitously.

"You are all right now," he said. "I'm sorry it hurt you. I did not know."

"How long was I dead?" I asked, rising and finding that the clasps had been removed.

"You slept only a few minutes. It was a slumber I don't understand."

I glanced at the box. It had ceased its sputtering.

"The devils in the box—where are they?" I inquired.

"There were no devils, my son. It was a natural force. Let's return upstairs—it's too damp down here—and I will try to explain.

"Yes, it was a natural force, my lad," when we were back in his study and I had sipped a glass of his wine. "The ancient Greeks called it *elektron*. Thales of Miletus experimented with it 600 years before Christ lived. I think it's the same phenomenon that causes lightning.

"I have gone much deeper into the mystery than did Thales—too deep, perhaps. I have learned how to produce it and partially control it. I have also discovered that it can kill, as does the lightning, and that, while it cannot produce life, it can prolong it *ad infinitum*.

"And since I have been out of prison I have made a prodigious step. *I have isolated its life element*.

"The fire you saw coming from the box, my lad, was literally the spark of life.

"I first applied the life element to species of the Ephemera, insects that live only a few hours, and the result was that they lived for weeks. I next tried it on small animals, mostly mice, but it is too early to remark its effects

on them. I noticed, however, that diseased rodents were immediately restored to health and that the same was true in the case of a dog that was nearly dead when it came into my hands.

"Therefore, my young friend from Basingstoke, I believe you need have no further fear of the disease that has been consuming you. And if the life spark has given you physical immortality, forgive me, my son, and curse me not in the dreary days to come.

"Go you back and wed the maiden, and my blessing be upon you and yours forever."

AND back to Basingstoke I hurried, leaving the house of the sorcerer the next morning and carrying with me one of his books which he had given me as a remembrance.

As I trekked my way homeward I knew I had been healed. I could feel life—new life—surging through me, bringing vigor, I had never known, and ere I reached Basingstoke, firm flesh had filled out my frame.

But I was never to wed the lass with eyes like lapis; nor, through the more than six centuries that have followed, any other. . . . The spark of life, in giving life, had killed the life within me.

I remained in Basingstoke twenty years without aging a day in appearance. Then the

townsfolk began to accuse me of having bartered my soul to Satan for eternal youth. I tried to explain. They laughed.

And then I began my wanderings, the loneliest, most accursed of mortals, an object of curiosity or suspicion wherever I tarried long; driven from clime to clime by fear and sensitiveness; an anachronism spurred ever onward by a life that prayed for death.

I was in Germany when the Black Death swept Europe; in France, that day in May when Joan of Arc was burned in the streets of Rouen. The Maid was a pathetic figure, weeping as she walked to the stake. And, seeking death in battle, I fought under many flags. I was with the German troops when they pillaged Rome; with Blake when he destroyed the Spanish fleet at Tenerife; with the Royalists against Cromwell, fought against my native land when the American Colonies struggled for freedom; with it again in its wars against Napoleon. Wounded only once.

But I said I would be brief.

I have been in America now since 1880. Twenty years ago I came to the Ozarks, seeking sanctuary in their loneliness. My respite is ending. The friendly hill people have begun to wonder. They are calling me the Young Old Man—a name I have

had in many lands. Even the children are afraid of my eyes.

It has been said in truth that the eyes are the windows of the soul. Mine reflects my weariness, if not my age. But it is only in the past few years that their incongruity has grown into gargoyle hideousness. The soul is bursting through the windows at last.

I am weary for oblivion. For five hundred years I have sighed for the waters of Lethe. But I have been a craven coward, afraid, because of the medieval superstition that still lies coiled in my soul, to summon death. An eternity of monotony behind me; centuries of memories that will not fade. An eternity of loathsome life before me. It shall not be. I will not go on. If it is true that God has existed from eternity, I am sure He will understand.

I have the formula of a potent but kindly poison I have remembered from the Dark Ages. I will brew it soon and drink it, and drinking, sing out with the poet, "Approach, strong deliveress!"

The sorcerer, in the book he gave me, cried out against the futility of life. The name of the volume is *Opus Tertium*. I still have it, though I destroyed its binding and title page centuries ago when priestly prejudice still execrated the memory of its author, whose name was ROGER BACON.

THE END

AMAZING STORIES

# The Secret Lives of HENRY KUTTNER

By **SAM MOSKOWITZ**

**S**EL**E**CT in your mind any of today's science fiction writers you consider third-rate and imagine what the effect might be on you if he suddenly confessed to being the real genius behind the published efforts of Theodore Sturgeon and Clifford D. Simak, and, for good measure, coyly owned up to responsibility for the Mark Clifton, Cordwainer Smith and Christopher Anvil stories. Then, you may approximate the impact created when Henry Kuttner admitted for publication that he was Lewis Padgett and Lawrence O'Donnell, and was also willing to accept credit for Keith Hammond, Kelvin Kent, Paul Edmonds and sundry other names that had been regarded as science fiction writers to bear watching.

The identity of Lewis Padgett had been leaked by John W. Campbell, Jr., editor of **ASTOUNDING SCIENCE FICTION** back in the summer of 1943, and a single

sentence reflecting that revelation had appeared in the Aug. 11, 1943 issue of **FANTASY FICTION FIELD**, a weekly news magazine devoted to the dissemination of information concerning fantasy and science fiction. A more complete story followed in the Feb. 7, 1944 issue. This information was picked up on faith by Arthur L. Widner, then conducting a popularity poll on various aspects of science fiction, and he lumped the Lewis Padgett votes for the best author of the year in with the Henry Kuttner nominations. Henry Kuttner, who had never even as much as "also ran" on any previous reader survey, and who had been regarded as a rather mediocre journeyman professional, abruptly moved into 13th spot in the final tabulations published in the Sept., 1943 **LE ZOMBIE**, a news and commentary journal published by Wilson Tucker and E. Everett Evans.

Within two years, as the news traveled through the science fiction world, Kuttner rose to first place in similar surveys over competition as competent as A. E. van Vogt, Isaac Asimov, Murray Leinster and Fritz Leiber, Jr. Many writers had catapulted to overnight fame on the strength of a single outstanding story. Kuttner was the first in the science fiction world to rise to glory incognito.

UNLIKE his close friend, Ray Bradbury, who has bared endless anecdotes concerning his tender years, Henry Kuttner in personal conversation and in print studiously by-passed the subject. He was born in Los Angeles in 1914, of parents who were of German, Jewish, English, Irish and Polish extraction. He bragged about one grandfather who was a rabbi. His father, who ran a book shop, died when he was five.

The early years were spent in San Francisco, where his mother strove to support him and two older brothers, during one period operating a boarding house. They moved back to Los Angeles about the time Henry entered high school, and upon his graduation he went to work in a literary agency operated by a cousin through marriage.

His interest in fantasy was traditional. He began with the

Oz books, graduated to Edgar Rice Burroughs and, at the age of 12, found himself "hooked" when AMAZING STORIES appeared in 1926. He was to remain an avid fan of science fiction and fantasy until his death.

With the years his interest shifted from science fiction towards weird-fantasy and as a devoted reader of WEIRD TALES he became a correspondent of H. P. Lovecraft and other members of the "Lovecraft Circle," particularly Robert Bloch.

Kuttner's first professional sale was a poem done in the pulsing rhythms of Robert E. Howard, *Ballad of the Gods*, published in the Feb., 1936 issue of WEIRD TALES. Kuttner is best remembered for his immense versatility, but in all evaluations of him his verse has been forgotten. True, most of it worshipped at the shrine of Robert E. Howard and a lesser quantity at the throne of H. P. Lovecraft, but all of it is eminently readable.

Kuttner's fictional debut, *The Graveyard Rats* in WEIRD TALES for March, 1936, marked the appearance of what is undoubtedly one of the half-dozen most truly *horrifying* short stories in the entire gamut of literature, and that is a carefully considered statement. A ghoulish cemetery caretaker, in New England's old Salem, crawls after immense rats through underground tun-



nels to reclaim a newly buried body they have dragged from the coffin. His nightmarish struggle against the rats and an ancient cadaver instinct with the reflexes of life, build to a denouement of such revolting terror that it requires a strong stomach to complete it.

In background, theme, build-up, style and intent the story owes everything to H. P. Lovecraft. While no evidence has been uncovered to show that Lovecraft helped in the writing of the story, it would be hard to conceive that he had not read it and offered suggestions before publication. *The Graveyard Rats* is so powerful an exercise in fear, so basic in striking the chord of all that man holds abhorrent and rears so pontifically in effectiveness above any other weird tale that Henry Kuttner subsequently had published (indeed, when the final evaluation is in, it may be the best thing he ever wrote), that one finds it difficult to attribute it to a fledgling 21-year-old, his first time out.

For this reason his identity was questioned. Replying to a reader in the May, 1936 issue of WEIRD TALES, editor Farnsworth Wright said: "No, Henry Kuttner is not a pen name. He is a young writer, for whom we predict real achievement; for he possesses genuine merit." It is ironic that a writer who would

build his reputation on pen names would initially be suspected of being one!

IN later years, Kuttner literally grew to hate *The Graveyard Rats*. He resented requests for reprint rights and contemplated violence when an endless parade of readers kept telling him it was the best thing he had ever written. He regarded praise of the story as an insinuation that the decades had taught him nothing about the technique of story telling.

In *The Secret of Kralitz* (WEIRD TALES, Oct., 1936) a young baron becomes a member of the living dead; the theme of *It Walks by Night* (WEIRD TALES, Dec., 1936) involves the dead who feed on the bodies of the dead. Both of these tales were stark imitations of Lovecraft and *The Eater of Souls* (WEIRD TALES, Jan., 1937) imitated Lovecraft's imitation of Lord Dunsany!

Early readers, judging Kuttner's personality by the inquiries into horror he had printed in WEIRD TALES were in for a shock when he joined the Los Angeles Chapter of The Science Fiction League late in 1936. A short, slight, dark-complexioned man, unhandsome and sporting a small, pencil-line moustache, he was timid and self-effacing, but the fount from which flowed a

seemingly inexhaustible stream of humor, dispensed in a dour, unsmiling fashion. His friends characterized him "as one of the funniest men alive." Descriptions like "the kindest, gentlest, most considerate human being it has been my pleasure to know," were forthcoming from many who knew him on a close personal basis.

Fritz Leiber, Jr., reporting of a 1937 meeting with Henry Kuttner in *Henry Kuttner: A Memorial Symposium*, published by Karen Anderson in August, 1958 said: "Hank (his favorite nickname) was already breaking sharply with the Lovecraft tradition."

This was evidenced by *I, The Vampire* (WEIRD TALES, Feb., 1937), where the vampire is portrayed sympathetically as a tragic victim of circumstances, capable of self sacrifice. E. Hoffman Price, a close friend of Kuttner's, adopted the viewpoint several years later to write *Spanish Vampire* (WEIRD TALES, Sept., 1939), a light and moving masterpiece.

In *We Are The Dead* (WEIRD TALES, April, 1937), the ghost of the Unknown Soldier deters a Senator from promoting legislation that may lead to war. The young Kuttner wasn't up to the job, but polished veteran Seabury Quinn picked up the idea with elaborations and scored a

hit with *Washington Nocturne* in WEIRD TALES for May, 1939.

There would, nevertheless, be other Lovecraft imitations, *The Salem Horror* (WEIRD TALES, May, 1937) and *The Jest of Droom Avista* (WEIRD TALES, Aug., 1937), for while Kuttner wanted to change, he seemed unable to express any qualities that were fundamentally his own.

ONE of the most interesting and successful stories of this period was his collaboration with his close friend Robert Bloch, *The Black Kiss* (WEIRD TALES, June, 1937). A tale of a sea creature that lures a man in his dreams to partake of its kisses, resulting in a transfer of bodies, this story employed a combination of the methods and styles of H. P. Lovecraft and C. L. Moore!

H. P. Lovecraft had sent some books to Henry Kuttner in 1936, asking that they be forwarded to C. L. Moore when he was through with them. Kuttner wrote a short note to Mr. C. L. Moore, whose work he much admired, and a correspondence ensued. "His letters were delightful from first to last," Mrs. Kuttner recalls, "and I still have all of them."

The next logical step was a literary collaboration combining Moore's two famous characters, Northwest Smith and Jirel of Joiry, for the first time in a story

titled *Quest of the Star Stone* which appeared in the Nov., 1937 WEIRD TALES. Symbolically, the uniting of the two characters anticipated their marriage some three years later. The story was written in relays, passing back and forth by mail.

They met for the first time in 1938, when Moore came to California on a vacation trip. In all, they saw each other about five times in two years, as Henry Kuttner motored back and forth between New York and California, and New York and Indianapolis, the rest of their courtship being conducted by mail.

During the Thirties an outgrowth of the mystery magazines appeared, publications such as THRILLING MYSTERY, HORROR TALES and TERROR TALES which specialized in stories of sadism, torture, flagellation and satanism, heavily flavored with sex. These stories were developed as though they related supernatural events, but it was the policy of the magazines to have normal, logical explanations for the erotic and sometimes debased delineations. Henry Kuttner sold regularly to THRILLING MYSTERY such tales as *Laughter of the Dead*, *The Dweller in the Tomb* and *Lord of the Lions*. It is likely that he used pen names for stories in HORROR and TERROR TALES, for these publications were the most blatantly titillating of all.

The influence of Julius Schwartz as an agent convinced Kuttner that he should divert some of his energies towards science fiction. Kuttner was reluctant at first, because though he liked science fiction his scientific background was so scanty that he felt inadequate to the job.

*When The Earth Lived* (THRILLING STORIES, Nov., 1937) is said by Julius Schwartz to have been the first story of science fiction written by Kuttner, though *Raider of the Spaceways*, (WEIRD TALES, July, 1937) chronologically appeared ahead of it. *When The Earth Lived* employed a fairly original idea of rays projected by scientists in the Macrocósmos bombarding the earth and investing life into such unlikely objects as automobiles, boats, coffee pots and jewelry, thereby raising hob. The handling was corny, the writing amateurish and the idea unbelievable, but Kuttner had launched his science fiction career.

*Raider of the Spaceways* found Kuttner utilizing Stanley G. Weinbaum's *Lotus Eaters* as a model. In *The Lotus Eaters* Weinbaum has a male and female adventurer discover an intelligent talking plant on the twilight zone of Venus. In *Raider of the Spaceways* Kuttner has a male and female adventurer dis-

cover an intelligent talking plant on the dark side of Venus. Kuttner gave it a "unique" twist, however. Weinbaum's plant was friendly, Kuttner's wasn't.

FOR no apparent reason, the next Kuttner story appeared under the Standard Magazine house name of Will Garth, *The Bloodless Peril* (THRILLING WONDER STORIES, Dec., 1937). It proposed the thesis that plant life, given the intelligence, would be as warlike and destructive as man. This was Kuttner's first use of a pen name in science fiction and his discovery of the device was to have a profound influence on his career.

Then Kuttner got his first big writing break in science fiction. THRILLING WONDER STORIES' editor, Mort Weisinger, ordered a series of novelets based on the moving picture industry of the future, the first, titled *Hollywood on the Moon*, appearing in the April, 1938 issue. Hollywood was something Kuttner knew, so he could write with some authenticity, but the stories were to be formularized by Stanley G. Weinbaum.

The lead characters, Tony Quade and Gerry Carlyle, resembled Ham Hammond and Pat Burlingame of Weinbaum's *Parasite Planet*, *Lotus Eaters* and *Planet of Doubt*. Each story featured strange, weird, lovable or

outré alien creatures of the type popularized by Weinbaum and each story attempted to imitate the superb, modern, swift dialogue characteristic of that master.

In a magazine where the common denominator of story quality was teen-age oriented, Kuttner's series on the Hollywood of the future had the virtue of being readable and mildly entertaining. No one realized it then, but the single element that enabled Kuttner to lift those yarns out of the cellar was that they required good elements of humor, an ingredient he had in abundance.

Almost simultaneously with *Hollywood in the Moon*, Henry Kuttner started another series for WEIRD TALES. Robert E. Howard, a gifted story teller, especially renowned for the creation of a character called Conan who fought and wrenched in a mythical era called the Hyborian age, committed suicide in 1936. His popularity was such that Clifford Ball attempted to create a character similar to Conan, called Duar, quitting after three stories. Kuttner now tried his hand at it with a bold figure titled Elak, brawling and loving in the manner of Conan and in the style of Robert E. Howard, but with supernatural settings from H. P. Lovecraft and stylistic hyperbole *a la* C. L. Moore.

The first in the series was *Thunder in the Dawn*, a two-part novel beginning in the May, 1938 WEIRD TALES. It was good fun, but in Howard's stories the character of Conan was bigger than life. Contrarily, Elak was overshadowed by the events of the story. The series terminated after four widely spaced stories.

When MARVEL SCIENCE STORIES' first issue, dated August, appeared on the newsstands in May, 1938, it was the first new science fiction magazine in seven years. Henry Kuttner had been writing sex-horror stories for its companion, MYSTERY TALES.

The editor of MARVEL SCIENCE STORIES, Robert O. Erisman, had decided to experiment with a little sex in science fiction. Up until then, sex was not only taboo but unwanted by the readers. Even a thread of love interest was barely tolerated and most stories got along without acknowledging the existence of women. Since Henry Kuttner was experienced both at the writing of science fiction and the horror magazine idea of what constituted sex, he was a logical man for the task.

Kuttner took two unsold short novels titled *Avengers in Space* and *Time Trap* and inserted a few "racy" passages involving nude women and monsters with high libidos and they ran in the first two issues of the new maga-

zine. The stories were fast-action science fiction and the "sex" by today's standards was rather tame, but they elicited a symphony of reader protest. Kuttner's never-high reputation skidded to a new low. Kuttner had two other decidedly second-rate stories in the first issue under pen-names; *Dark Heritage* as Robert O. Kenyon and *Dictator of the Americas* as James Hall, the latter the most cheaply sex-laden story in the magazine.

THE only defender Kuttner had was Dr. Thomas S. Gardner, whose article *Sex in Science Fiction* appeared in the December, 1945 issue of FANTASY TIMES, seven years later. He said: "When men do not keep women clothed under such conditions," he wrote, "how can you expect alien minds to do so? The story of Kuttner's was real, men and creatures act like that in life."

Kuttner's best story of the year, *Hands Across the Void*, a near-poetic tale of the self-sacrifice of a Titanian to save Earthmen from destruction at the hands of their giant ant "servants," appeared in the Dec., 1938 THRILLING WONDER STORIES under the house name of Will Garth. He received no credit for it.

His lack of popularity, combined with circumstance, forced Kuttner further and further into

the device of pseudonyms as 1939 progressed. "Keith Hammond" originated as a device for running two stories in the same issue of *STRANGE STORIES*, a weird fiction magazine similar to *WEIRD TALES*, published as a companion to *THRILLING WONDER STORIES*. Most of the stories under the Hammond name were imitations of Lovecraft and may even have been previous rejections from *WEIRD TALES*.

"Kelvin Kent" was used at first in collaboration, then alternately with Arthur K. Barnes for a series of humorous stories in *THRILLING WONDER STORIES*. "Kelvin" was Barnes' middle name. The stories revolved around Pete Manx, side-show concessionaire in an amusement park, whose intelligence is shunted back in time into the bodies of ancient Romans, Greeks, Egyptians and other residents of historical and legendary lands, where through his crude but native cunning, he cons his way to success. The first, *Roman Holiday*, in *THRILLING WONDER STORIES* for Aug., 1939, proved the most popular story in the issue, ensuring a fairly long run for the series.

The pen name of Paul Edmonds began in the May, 1939 issue of *SCIENCE FICTION*, a new science-fiction magazine of that period edited by Charles D. Hornig, and was used to cover up the

fact that Kuttner was selling them his rejects at half the rate he received from *THRILLING WONDER STORIES*. Most of the stories under this name possess little merit.

Kuttner had visited New York occasionally on business and detested the City. On June 14, 1939 he had written to his agent Julius Schwartz: "I don't intend to visit New York. I can get the same effect as I do in New York by crawling into the dirtiest corner of the garage and screaming at the top of my voice, blowing the auto horn, and energetically sniffing the exhaust. Once you visit California, my lad, you realize that New York is Satan's privy."

On Dec. 3, 1939, Henry Kuttner showed up at a meeting of New York's Queens SFL in the tow of Mort Weinsinger, editor of *THRILLING WONDER STORIES* and Julius Schwartz, his agent. He announced that though the city repelled him, the variety of markets he was selling to, including many in the adventure field, made it increasingly important that he live closer to his source of income. He had quit his job with the Los Angeles literary agency and was taking up residence in New York with his mother.

MORE than a year earlier, Henry Kuttner had made

the acquaintance of Virgil Finlay, renowned WEIRD TALES artist at a Times Square bar. They became fast friends and their frequent elbow tipping was eventually enshrined in a short story Henry Kuttner wrote around the cover of the May, 1943 issue of SUPER SCIENCE STORIES, titled *Reader, I Hate You*, with himself and Virgil Finlay as the lead characters.

When Henry Kuttner brought Catherine Lucille Moore to New York, the only people present at the ceremony held at the City Hall the morning of June 7, 1940 were Henry's mother and Mr. and Mrs. Virgil Finlay. Virgil paid the Justice of the Peace \$10, bought the bride a dubbonet and soda, and the career of the most famous writing duo in science fiction history was launched.

Catherine then learned what every woman must, that you don't know a man until you've lived with him. Henry had his own little peculiarities. When cloistered in his room on an assignment, his closest buddy, returning from a three year trip in Tanganyika, would not be admitted if his arrival was unexpected. An excellent driver, he hated to drive. He worked off nervous energy by pounding the piano insistently, horribly and loud. Shaving was a chore he indulged in as infrequently as

possible and the age and condition of the clothes he wore was enough to make the most jaundiced publisher compulsively reach for his checkbook.

It would be clean cut and easy to say that Kuttner's transition to a top-rank author started at the moment of matrimony, but whether through inspiration or otherwise there was evidence of mounting ability immediately before that.

THRILLING WONDER STORIES, in its April, 1940 number, ran the memorable *Beauty and the Beast*, which tells of an intelligent creature from Venus who is killed because of his monstrous appearance, as he attempts to deliver a message that would have saved the Earth from disaster from lovely but deadly alien plants.

The May-June, 1940 issue of FAMOUS FANTASTIC MYSTERIES carried his touching, well-told fantasy *Pegasus*, concerning a boy who catches and tames a flying horse. Though possibly inspired by Edmond Hamilton's masterpiece, *He That Hath Wings* in the July, 1938 issue of WEIRD TALES, both stories dealing with attempts to earth-bind a winged creature, Kuttner's story has sufficient difference and quality to stand on its own.

UNKNOWN for April, 1940, a prestige magazine edited by John W. Campbell, which printed



fairy tales for grownups, contained Kuttner's humorous fantasy *All is Illusion*, based on the subject of the title. In combining humor and fantasy with just a dash of Thorne Smith, Kuttner was in his element, but the speed at which he wrote divested this story, and a majority of his subsequent fantasies for UNKNOWN, of all believability. Even the flashes of cleverness and the author's increasing skill at turning a phrase failed to rescue them. Most of his science fiction, though based on tenuous premises, was momentarily believable. Virtually none of his deliberate fantasies possessed this essential.

AFTER a year of New York, both Catherine and Henry Kuttner decided that they were not cut out to live in "Bagdad of the Hudson" and moved to Laguna Beach, Calif. More and more, writing became a symbiotic relationship. They frequently wrote in relays, one taking over sometimes in the middle of a sentence, writing the other past a mental block. Often one supplied the idea and the other wrote the story. Henry Kuttner was great at beginning a story, but would lose steam part way through. C. L. Moore enjoyed picking up the threads and tying them together.

Just as frequently Henry

Kuttner would write the first draft and C. L. Moore would put it into final form. Kuttner was better than Moore at plotting, but Moore was a far more accomplished stylist.

Pearl Harbor played an unexpected role in their lives. For his magazines ASTOUNDING SCIENCE-FICTION and UNKNOWN WORLDS, John Campbell had developed a crack team of writers. Now, between military service and war work, he lost Robert A. Heinlein, Isaac Asimov, Theodore Sturgeon, L. Sprague de Camp and L. Ron Hubbard. He had to develop a new group of authors, who would continue to produce the quality and style of fiction his readers had come to expect.

Henry Kuttner was one of those approached, but a pen name was considered essential. The Kuttners selected the cognomen of Lewis Padgett. "Lewis" was Kuttner's mother's maiden name and "Padgett" was Moore's grandmother's maiden name.

Actually, Kuttner himself had been inducted into the armed services, but a slight heart murmur kept him permanently assigned to the Medical Corps at Fort Monmouth, N.J. and his wife took up residence in nearby Red Bank. Both locations were only about 50 miles from New York.

The first story under the Padgett name, *Deadlock* (ASTOUNDING, Aug., 1942) obviously was intended to emulate Asimov's highly popular series of amusing robot stories, and it barely passed muster.

*The Twonkey*, in the September issue, struck a highly original note in concept, a radio which is really a robot, censors reading matter, drinking habits and other elements possibly harmful to its owner, while obligingly pitching in to wash the dishes. The style, reading new to the science fiction audience, was actually simulated John Collier. The result was hailed as a minor classic.

The third story, *Piggy Bank*, in the Dec., 1942 issue of ASTOUNDING reverted to the Asimov robot formula, but the fourth, *Time Locker* (ASTOUNDING, Jan., 1943) was not a robot story and was a little masterpiece involving a locker that emptied into the future, and the man who killed himself using it. It was slickly written with an adroit twist that could not have been anticipated by the readers.

KUTTNER'S own name appeared on a second story in that issue, titled "... *Nothing but Gingerbread Left*," inspired by a verse from Lewis Carroll. No one linked it with the Padgett story in the February issue,

carrying the Carrollian title, *Mimsy Were the Borogoves*. That one dealt with toys from our future projected back in time where they are found by youngsters who devise from them a formula for entering a non-Euclidean universe, disappearing forever from the sight of their parents. Immediately recognized as a classic in the field it is quite obvious that this story served as the inspiration for *The Veldt* by Ray Bradbury, specifically, and possibly for his whole series of childhood centered stories. At that time Kuttner was personally helping Bradbury in his career, even to the extent of rewriting one of his stories. Later he would help Richard Matheson in the same personalized fashion.

*Shock*, in the March, 1943 ASTOUNDING, about a genius out of time who develops to be an escapee from a padded cell of the future, set the pattern for similar tales to come, including Gore Vidal's play, *Visit from a Small Planet*.

The same issue debuted Lawrence O'Donnell with *Clash By Night*, substance derived and expanded from Clifford D. Simak's *Rim of the Deep* and dealing with a Venusian culture where all civilization survives in the "keeps," giant domes beneath the seas. This one he wrote on his own, but he had the help of

Moore for the novel-length sequel *Fury* (1947), dramatizing the conflict between the long-lived and short-lived Venusians. Though primarily action stories, both proved very popular.

WHEN the news eventually broke that Henry Kuttner was both Lewis Padgett and Lawrence O'Donnell, all past transgressions were forgiven if not completely forgotten by the readers. Their enthusiasm was partially predicated on superior craftsmanship, partially on the desire to see the underdog come out on top, but predominantly evoked because Kuttner usually reminded them of someone they liked. A superbly proficient literary mimic, Kuttner usually wrote like whoever was in demand at the time.

He left the Medical Corps in 1945 and for a while lived in Hastings-on-Hudson, New York. He moved back to Laguna Beach, Calif., and in 1950 utilized the GI Bill of Rights to enter the University of Southern California as a freshman. He felt acutely that he needed a basis to find himself. Always weak in science, he included physics among his courses. His wife accompanied him to school. In 1954 he received his B.A. He had finished his thesis for his M.A., but died from an acute coronary on Feb. 3, 1958.

In 1957 the Kuttners had been hired by Warner Bros. to do a screenplay for Nathaniel Hawthorne's science fiction masterpiece, *Rappaccinni's Daughter*. Work had been started when a depression hit Hollywood and the idea was cancelled. A month later they signed a contract to do a TV show and were in the midst of a revision of the script when Henry died. As she had so often in the past, Catherine finished it.

In the cold dawn of appraisal, detaching oneself from the man's likability as a human being, the introduction of the John Collier-type of sophisticated fantasy into science fiction magazines was his major contribution. *Presenting Moonshine* by Collier, published by Viking in 1941, composed of dozens of artistically superb and fantastic ironies, had taken the literati by storm. Its popularity resulted in a Readers Club Edition in 1943 under the title of *A Touch of Nutmeg*. Both *Mimsy Were the Borogoves* and the almost-as-popular *Call Him Human* (THRILLING WONDER STORIES, Fall, 1946, published under the pen name of Keith Hammond), are variations of *Thus I Refute Beelzy* by John Collier.

Kuttner felt, and many agree, that his best story in this vein was *Don't Look Now* (STARTLING STORIES, March 1948), where one man at a bar warns his drinking

companion to be on the lookout for Martians who can be recognized by a third eye in their forehead. As he walks away, the listener opens his third eye and stares at him. The story has since been done frequently on television.

*The Shock*, *The Twonky* and *Time Locker* (converted into a robot story to fill out the collection *Robots Have No Tails*, Gnome Press, 1952) are essentially in the same category with the addition of a diverting pot-pourri of fantastic elements, too rich for the blood of the uninitiated, but grist for the mills of the science fiction fans.

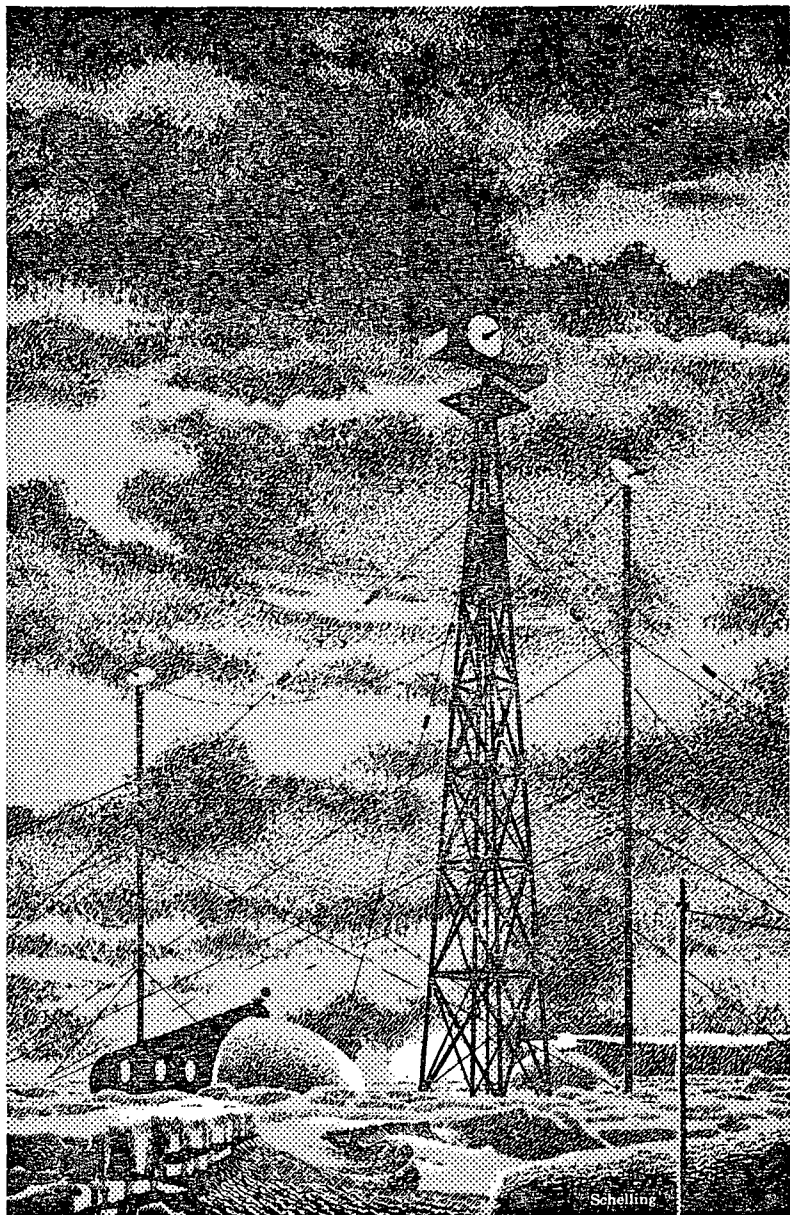
His A. E. van Vogt "kick," most obviously apparent in his well-done Baldies series, of which he wrote all but *Beggars in Velvet* and collectively had published as *Mutant* by Gnome Press in 1953, are variations on *Slan*. *The Fairy Chessman* and *Tomorrow and Tomorrow*, though creditable efforts, are also attempts to duplicate the methods of van Vogt.

The Lancelot Hogben series which ran in THRILLING WONDER STORIES in 1947-49 (the last of which, *Cold War*, was completely written by Moore from a plot

supplied by Kuttner), relating the misadventures of a family of hillbilly mutations, were ludicrously unbelievable comedies, blatantly drawn from the Bud Gregory series which Murray Leinster wrote under the name of William Fitzgerald in the same magazine.

His popular A. Merritt approximations, beginning with *Earth's Last Citadel*, serialized in ARGOSY in 1943, reached a height of popularity with *Dark World* in the Summer, 1946 STARTLING STORIES, with its obvious echoes of *Dwellers in the Mirage*. This group of stories was lent a note of authenticity by the contributions of Moore, whose colorful style, at times was reminiscent of Merritt.

The man had discipline, technical brilliance, immense versatility and ingenuity and these betrayed him. Who was the real Henry Kuttner? We will never know. Lured by opportunism, suffering from an acute sense of inadequacy, he refused to stand alone, but leaned for support upon a parade of greats: H. P. Lovecraft, Robert E. Howard, Stanley G. Weinbaum, A. Merritt, John Collier, A. E. van Vogt, and, of course, C. L. Moore.



# Answer, Please Answer

By BEN BOVA

Illustrated by SCHELLING

***Astronomer Bova draws upon the facts of his field to weave a story that will grip your emotions and tantalize your mind—long after you have finished reading it.***

WE had been at the South Pole a week. The outside thermometer read fifty degrees below zero, Fahrenheit. The winter was just beginning.

"What do you think we should transmit to McMurdo?" I asked Rizzo.

He put down his magazine and half-sat up in his bunk. For a moment there was silence, except for the nearly inaudible hum of the machinery that jammed our tiny dome, and the muffled shrieking of the ever-present wind, above us.

Rizzo looked at the semi-circle of control consoles, computers,

and meteorological sensors with an expression of disgust that could be produced only by a drafted soldier.

"Tell 'em it's cold, it's gonna get colder, and we've both got appendicitis and need replacements immediately."

"Very clever," I said, and started touching the buttons that would automatically transmit the sensors' memory tapes.

Rizzo sagged back into his bunk. "Why?" He asked the curved ceiling of our cramped quarters. "Why me? Why here? What did I ever do to deserve spending the whole goddammed



winter at the goddammed South Pole?"

"It's strictly impersonal," I assured him. "Some bright young meteorologist back in Washington has convinced the Pentagon that the South Pole is the key to the world's weather patterns. So here we are."

"It doesn't make sense," Rizzo continued, unhearing. His dark, broad-boned face was a picture of wronged humanity. "Everybody knows that when the missiles start flying, they'll be coming over the North Pole. . . . The goddammed Army is a hundred and eighty degrees off base."

"That's about normal for the Army, isn't it?" I was a drafted soldier, too.

Rizzo swung out of the bunk and paced across the dimly-lit room. It only took a half-dozen paces; the dome was small and most of it was devoted to machinery.

"Don't start acting like a caged lion," I warned. "It's going to be a long winter."

"Yeah, guess so." He sat down next to me at the radio console and pulled a pack of cigarets from his shirt pocket. He offered one to me, and we both smoked in silence for a minute or two.

"Got anything to read?"

I grinned. "Some microspool catalogues of stars."

"Stars?"

"I'm an astronomer . . . at

least, I was an astronomer, before the National Emergency was proclaimed."

Rizzo looked puzzled. "But I never heard of you."

"Why should you?"

"I'm an astronomer too."

"I thought you were an electronicist."

He pumped his head up and down. "Yeah . . . at the radio astronomy observatory at Greenbelt. Project OZMA. Where do you work?"

"Lick Observatory . . . with the 120-inch reflector."

"Oh . . . an *optical* astronomer."

"Certainly."

"You're the first optical man I've met." He looked at me a trifle queerly.

I shrugged. "Well, we've been around a few millenia longer than you static-scanners."

"Yeah, guess so."

I DIDN'T realize that Project OZMA was still going on. Have you had any results yet?"

It was Rizzo's turn to shrug. "Nothing yet. The project has been shelved for the duration of the emergency, of course. If there's no war, and the dish doesn't get bombed out, we'll try again."

"Still listening to the same two stars?"

"Yeah . . . Tau Ceti and Epsilon Eridani. They're the only



two Sun-type stars within reasonable range that might have planets like Earth."

"And you expect to pick up radio signals from an intelligent race."

"Hope to."

I flicked the ash off my cigarette. "You know, it always struck me as rather hopeless . . . trying to find radio signals from intelligent creatures."

"Whattaya mean, hopeless?"

"Why should an intelligent race send radio signals out into interstellar space?" I asked. "Think of the power it requires, and the likelihood that it's all wasted effort, because there's no one within range to talk to."

"Well . . . it's worth a try, isn't it . . . if you think there could be intelligent creatures somewhere else . . . on a planet of another star."

"Hmph. We're trying to find another intelligent race; are we transmitting radio signals?"

"No," he admitted. "Congress wouldn't vote the money for a transmitter that big."

"Exactly," I said. "We're listening, but not transmitting."

Rizzo wasn't discouraged. "Listen, the chances—just on statistical figuring alone—the chances are that there're millions of other solar systems with intelligent life. We've got to try contacting them! They might have knowledge that we don't

have . . . answers to questions that we can't solve yet . . ."

"I completely agree," I said. "But listening for radio signals is the wrong way to do it."

"Huh?"

"Radio broadcasting requires too much power to cover interstellar distances efficiently. We should be *looking* for signals, not listening for them."

"Looking?"

"Lasers," I said, pointing to the low-key lights over the consoles. "Optical lasers. Superlamps shining out in the darkness of the void. Pump in a modest amount of electrical power, excite a few trillion atoms, and out comes a coherent, pencil-thin beam of light that can be seen for millions of miles."

"Millions of miles aren't light-years," Rizzo muttered.

"We're rapidly approaching the point where we'll have lasers capable of lightyear ranges. I'm sure that some intelligent race somewhere in this galaxy has achieved the necessary technology to signal from star to star—by light beams."

"Then how come we haven't seen any?" Rizzo demanded.

"Perhaps we already have."

"What?"

"We've observed all sorts of variable stars—Cepheids, RR Lyrae's, T Tauri's. We assume that what we see are stars, pulsating and changing brightness for

reasons that are natural, but unexplainable to us. Now, suppose what we are really viewing are laser beams, signalling from planets that circle stars too faint to be seen from Earth?"

In spite of himself, Rizzo looked intrigued.

"It would be fairly simple to examine the spectra of such light sources and determine whether they're natural stars or artificial laser beams."

"Have you tried it?"

I nodded.

"And?"

I hesitated long enough to make him hold his breath, waiting for my answer. "No soap. Every variable star I've examined is a real star."

He let out his breath in a long, disgusted puff. "Ahhh, you were kidding all along. I thought so."

"Yes," I said. "I suppose I was."

**T**IME dragged along in the weather dome. I had managed to smuggle a small portable telescope along with me, and tried to make observations whenever possible. But the weather was usually too poor. Rizzo, almost in desperation for something to do, started to build an electronic image-amplifier for me.

Our one link with the rest of the world was our weekly radio message from McMurdo. The times for the messages were ran-

domly scrambled, so that the chances of their being intercepted or jammed were lessened. And we were ordered to maintain strict radio silence.

As the weeks sloughed on, we learned that one of our manned satellites had been boarded by the Reds at gunpoint. Our spacecrews had put two Red automated spy-satellites out of commission. Shots had been exchanged on an ice-island in the Arctic. And six different nations were testing nuclear bombs.

We didn't get any mail of course. Our letters would be waiting for us at McMurdo when we were relieved. I thought about Gloria and our two children quite a bit, and tried not to think about the blast and fallout patterns in the San Francisco area, where they were.

"My wife hounded me until I spent pretty - nearly every damned cent I had on a shelter, under the house," Rizzo told me. "Damned shelter is fancier than the house. She's the social leader of the disaster set. If we don't have a war, she's gonna feel damned silly."

I said nothing.

The weather cleared and steadied for a while (days and nights were indistinguishable during the long Antarctic winter) and I split my time evenly between monitoring the meteorological sensors and observing the stars.

The snow had covered the dome completely, of course, but our "snorkel" burrowed through it and out into the air.

"This dome's just like a submarine, only we're submerged in snow instead of water," Rizzo observed. "I just hope we don't sink to the bottom."

"The calculations show that we'll be all right."

He made a sour face. "Calculations proved that airplanes would never get off the ground."

The storms closed in again, but by the time they cleared once more, Rizzo had completed the image-amplifier for me. Now, with the tiny telescope I had, I could see almost as far as a professional instrument would allow. I could even lie comfortably in my bunk, watch the amplifier's viewscreen, and control the entire set-up remotely.

Then it happened.

At first it was simply a curiosity. An oddity.

**I** HAPPENED to be studying a Cepheid variable star—one of the huge, very bright stars that pulsate so regularly that you can set your watch by them. It had attracted my attention because it seemed to be unusually close for a Cepheid—only 700 lightyears away. The distance could be easily gauged by timing the star's pulsations.\*

I talked Rizzo into helping me

set up a spectrometer. We scavenged shamelessly from the dome's spare parts bin and finally produced an instrument that would break up the light of the star into its component wavelengths, and thereby tell us much about the star's chemical composition and surface temperature.

At first I didn't believe what I saw.

The star's spectrum—a broad rainbow of colors—was crisscrossed with narrow dark lines. That was all right. They're called absorption lines; the Sun has thousands of them in its spectrum. But one line—one—was an insolently bright emission line. All the laws of physics and chemistry said it couldn't be there.

But it was.

We photographed the star dozens of times. We checked our instruments ceaselessly. I spent hours scanning the star's "official" spectrum in the microspool reader. The bright emission line was not on the catalogue spectrum. There was nothing wrong with our instruments.

Yet the bright line showed up. It was real.

"I don't understand it," I ad-

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*\*Astronomers have been able, since about 1910, to estimate the distances of Cepheid variable stars by timing their pulsations. The length of this type of star's pulsation is a true measure of its intrinsic brightness. Comparing the star's actual brightness to its apparent brightness, as seen from Earth, gives a good value for the star's distance.*

mitted. "I've seen stars with bright emission spectra before, but a single bright line in an absorption spectrum! It's unheard-of. One single wavelength . . . one particular type of atom at one precise energy-level . . . why? Why is it emitting energy when the other wavelengths aren't?"

Rizzo was sitting on his bunk, puffing a cigaret. He blew a cloud of smoke at the low ceiling. "Maybe it's one of those laser signals you were telling me about a couple weeks ago."

I scowled at him. "Come on, now. I'm serious. This thing has me puzzled."

"Now wait a minute . . . you're the one who said radio astronomers were straining their ears for nothing. You're the one who said we ought to be looking. So look!" He was enjoying his revenge.

I shook my head, and turned back to the meteorological equipment.

But Rizzo wouldn't let up. "Suppose there's an intelligent race living on a planet near a Cepheid variable star. They figure that any other intelligent creatures would have astronomers who'd be curious about their star, right? So they send out a laser signal that matches the star's pulsations. When you look at the star, you see their signal. What's more logical?"

"All right," I grouched. "You've had your joke . . ."

"Tell you what," he insisted. "Let's put that one wavelength into an oscilloscope and see if a definite signal comes out. Maybe it'll spell out 'Take me to your leader' or something."

I IGNORED him and turned my attention to Army business. The meteorological equipment was functioning perfectly, but our orders read that one of us had to check it every twelve hours. So I checked and tried to keep my eyes from wandering as Rizzo tinkered with a photocell and oscilloscope.

"There we are," he said, at length. "Now let's see what they're telling us."

In spite of myself I looked up at the face of the oscilloscope. A steady, gradually sloping greenish line was traced across the screen.

"No message," I said.

Rizzo shrugged elaborately.

"If you leave the 'scope on for two days, you'll find that the line makes a full swing from peak to null," I informed him. "The star pulsates every two days, bright to dim."

"Let's turn up the gain," he said, and he flicked a few knobs on the front of the 'scope.

The line didn't change at all.

"What's the sweep speed?" I asked.

"One nanosecond per centimeter." That meant that each centimeter-wide square on the screen's face represented one billionth of a second. There are as many nanoseconds in one second as there are seconds in thirty-two years.

"Well, if you don't get a signal at that sensitivity, there just isn't any signal there," I said.

Rizzo nodded. He seemed slightly disappointed that his joke was at an end. I turned back to the meteorological instruments, but I couldn't concentrate on them. Somehow I felt disappointed, too. Subconsciously, I suppose, I had been hoping that Rizzo actually would detect a signal from the star. *Fool!* I told myself. But what could explain that bright emission line? I glanced up at the oscilloscope again.

And suddenly the smooth steady line broke into a jagged series of millions of peaks and nulls!

I stared at it.

Rizzo was back on his bunk again, reading one of his magazines. I tried to call him, but the words froze in my throat. Without taking my eyes from the flickering 'scope, I reached out and touched his arm.

He looked up.

"Holy Mother of God," Rizzo whispered.

For a long time we stared si-

lently at the fluttering line dancing across the oscilloscope screen, bathing our tiny dome in its weird greenish light. It was eerily fascinating, hypnotic. The line never stood still; it jabbered and stuttered, a series of millions of little peaks and nulls, changing almost too fast for the eye to follow, up and down, calling to us, speaking to us, up, down, never still, never quiet, constantly flickering its unknown message to us.

"Can it be . . . people?" Rizzo wondered. His face, bathed in the greenish light, was suddenly furrowed, withered, ancient: a mixture of disbelief and fear.

"What else could it be?" I heard my own voice answer. "There's no other explanation possible."

We sat mutely for God knows how long.

Finally Rizzo asked, "What do we do now?"

THE question broke our entranced mood. What do we do? What action do we take? We're thinking men, and we've been contacted by other creatures that can think, reason, send a signal across seven hundred lightyears of space. So don't just sit there in stupified awe. Use your brain, prove that you're worthy of the tag *sapiens*.

"We decode the message," I announced. Then, as an after-

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thought, "But don't ask me how."

We should have called McMurdo, or Washington. Or perhaps we should have attempted to get a message through to the United Nations. But we never even thought of it. This was our problem. Perhaps it was the sheer isolation of our dome that kept us from thinking about the rest of the world. Perhaps it was sheer luck.

"If they're using lasers," Rizzo reasoned, "they must have a technology something like ours."

"Must have had," I corrected. "That message is seven hundred years old, remember. They were playing with lasers when King John was signing the Magna Charta and Genghis Khan owned most of Asia. Lord knows what they have now."

Rizzo blanched and reached for another cigaret.

I turned back to the oscilloscope. The signal was still flashing across its face.

"They're sending out a signal," I mused, "probably at random. Just beaming it out into space, hoping that someone, somewhere will pick it up. It must be in some form of code . . . but a code that they feel can be easily cracked by anyone with enough intelligence to realize that there's a message there."

"Sort of an interstellar Morse code."

I shook my head. "Morse code depends on both sides knowing the code. There's no key."

"Cryptographers crack codes."

"Sure. If they know what language is being used. We don't know the language, we don't know the alphabet, the thought processes . . . nothing."

"But it's a code that can be cracked easily," Rizzo muttered.

"Yes," I agreed. "Now what the hell kind of a code can they assume will be known to another race that they've never seen?"

Rizzo leaned back on his bunk and his face was lost in shadows.

"An interstellar code," I rambled on. "Some form of presenting information that would be known to almost any race intelligent enough to understand lasers. . . ."

"Binary!" Rizzo snapped, sitting up on the bunk.

"What?"

"Binary code. To send a signal like this, they've gotta be able to write a message in units that're only a billionth of a second long. That takes computers. Right? Well, if they have computers, they must figure that we have computers. Digital computers run on binary code. Off or on . . . go or no-go. It's simple. I'll bet we can slap that signal on a tape and run it through our computer here."

"To assume that they use com-

puters exactly like ours . . .”

“Maybe the computers are completely different,” Rizzo said excitedly, “but the binary code is basic to them all. I’ll bet on that! And this computer we’ve got here—this transistorized baby—she can handle more information than the whole Army could feed into her. I’ll bet nothing has been developed anywhere that’s better for handling simple one-plus-one types of operations.”

I shrugged. “All right. It’s worth a trial.”

IT took Rizzo a few hours to get everything properly set up. I did some arithmetic while he worked. If the message was in binary code, that meant that every cycle of the signal—every flick of the dancing line on our screen—carried a bit of information. The signal’s wavelength was 5000 Angstroms; there are a hundred million Angstrom units to the centimeter; figuring the speed of light . . . the signal could carry, in theory at least, something like 600 trillion bits of information *per second*.

I told Rizzo.

“Yeah, I know. I’ve been going over the same numbers in my head.” He set a few switches on the computer control board. “Now let’s see how many of the 600 trillion we can pick up.” He sat down before the board and pressed a series of buttons.

We watched, hardly breathing, as the computer’s spools began spinning and the indicator lights flashed across the control board. Within a few minutes, the printer chugged to life.

Rizzo swivelled his chair over to the printer and held up the unrolling sheet in a trembling hand.

Numbers. Six digit numbers. Completely meaningless.

“Gibberish,” Rizzo snapped.

It was peculiar. I felt relieved and disappointed at the same time.

“Something’s screwy,” Rizzo said. “Maybe I fouled up the circuits . . .”

“I don’t think so,” I answered. “After all, what did you expect out of the computer? Shakespearean poetry?”

“No, but I expected numbers that would make some sense. One and one, maybe. Something that means something. This stuff is nowhere.”

Our nerves must have really been wound tight, because before we knew it we were in the middle of a nasty argument—and it was over nothing, really. But in the middle of it:

“Hey, look,” Rizzo shouted, pointing to the oscilloscope.

The message had stopped. The scope showed only the calm, steady line of the star’s basic two-day-long pulsation.

It suddenly occurred to us that

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we hadn't slept for more than 36 hours, and we were both exhausted. We forgot the senseless argument. The message was ended. Perhaps there would be another; perhaps not. We had the telescope, spectrometer, photocell, oscilloscope, and computer set to record automatically. We collapsed into our bunks. I suppose I should have had monumental dreams. I didn't. I slept like a dead man.

WHEN we woke up, the oscilloscope trace was still quiet.

"Y'know," Rizzo muttered, "it might just be a fluke . . . I mean, maybe the signals don't mean a damned thing. The computer is probably translating nonsense into numbers just because it's built to print out numbers and nothing else."

"Not likely," I said. "There are too many coincidences to be explained. We're receiving a message, I'm certain of it. Now we've got to crack the code."

As if to reinforce my words, the oscilloscope trace suddenly erupted into the same flickering pattern. The message was being sent again.

We went through two weeks of it. The message would run through for seven hours, then stop for seven. We transcribed it on tape 48 times and ran it through the computer constantly. Always the same result—six-

digit numbers; millions of them. There were six different seven-hour-long messages, being repeated one after the other, constantly.

We forgot the meteorological equipment. We ignored the weekly messages from McMurdo. The rest of the world became a meaningless fiction to us. There was nothing but the confounded, tantalizing, infuriating, enthralling message. The National Emergency, the bomb tests, families, duties—all transcended, all forgotten. We ate when we thought of it and slept when we couldn't keep our eyes open any longer. The message. What was it? What was the key to unlock its meaning?

"It's got to be something universal," I told Rizzo. "Something universal . . . in the widest sense of the term."

He looked up from his desk, which was wedged in between the end of his bunk and the curving dome wall. The desk was littered with printout sheets from the computer, each one of them part of the message.

"You've only said that a half-million times in the past couple weeks. What the hell is universal? If you can figure that out, you're damned good."

*What is universal?* I wondered. *You're an astronomer. You look out at the universe. What do you see?* I thought about it. *What do*

*I see? Stars, gas, dust clouds, planets . . . what's universal about them? What do they all have that . . .*

"Atoms!" I blurted.

Rizzo cocked a weary eye at me. "Atoms?"

"Atoms. Elements. Look . . ." I grabbed up a fistful of the sheets and thumbed through them. "Look . . . each message starts with a list of numbers. Then there's a long blank to separate the opening list from the rest of the message. See? Every time, the same length list."

"So?"

"The periodic table of the elements!" I shouted into his ear. "That's the key!"

Rizzo shook his head. "I thought of that two days ago. No soap. In the first place, the list that starts each message isn't always the same. It's the same length, all right, but the numbers change. In the second place, it always begins with 100000. I looked up the atomic weight of hydrogen—it's 1.008 something."

That stopped me for a moment. But then something clicked into place in my mind.

**W**HY is the hydrogen weight 1.008?" Before Rizzo could answer, I went on, "For two reasons. The system we use arbitrarily rates oxygen as 16-even. Right? All the other weights are

calculated from oxygen's. And we also give the average weight of an element, counting all its isotopes. Our weight for hydrogen also includes an adjustment for tiny amounts of deuterium and tritium. Right? Well, suppose *they* have a system that rates hydrogen as a flat one: 1.00000. Doesn't *that* make sense?"

"You're getting punchy," Rizzo grumbled. "What about the isotopes? How can they expect us to handle decimal points if they don't tell us about them . . . mental telepathy? What about . . ."

"Stop arguing and start calculating," I snapped. "Change that list of numbers to agree with our periodic table. Change 1.00000 to 1.008-whatever-it-is and tackle the next few elements. The decimals shouldn't be so hard to figure out."

Rizzo grumbled to himself, but started working out the calculations. I stepped over to the dome's microspool library and found an elementary physics text. Within a few minutes, Rizzo had some numbers and I had the periodic table focused on the microspool reading machine.

"Nothing," Rizzo said, leaning over my shoulder and looking at the screen. "They don't match at all."

"Try another list. They're not all the same."

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He shrugged and returned to his desk. After a while he called out, "their second number is 3.97123; it works out to 4.003-something."

It checked! "Good. That's helium. What about the next one, lithium?"

"That's 6.940."

"Right!"

Rizzo went to work furiously after that. I pushed a chair to the desk and began working up from the end of the list. It all checked out, from hydrogen to a few elements beyond the artificial ones that had been created in the laboratories here on Earth.

"That's it," I said. "That's the key. That's our Rosetta Stone . . . the periodic table."

Rizzo stared at the scribbled numbers and jumble of papers. "I bet I know what the other lists are . . . the ones that don't make sense."

"Oh?"

"There are other ways to identify the elements . . . vibration resonances, quantum wavelengths . . . somebody named Lewis came out a couple years ago with a Quantum Periodic Table . . ."

"They're covering all the possibilities. There are messages for many different levels of understanding. We just decoded the simplest one."

"Yeah."

I noticed that as he spoke, Rizzo's hand—still tightly clutching the pencil—was trembling and white with tension.

"Well?"

Rizzo licked his lips. "Let's get to work."

WE were like two men possessed. Eating, sleeping, even talking was ignored completely as we waded through the hundreds of sheets of paper. We could decode only a small percentage of them, but they still represented many hours of communication. The sheets that we couldn't decode, we suspected, were repetitions of the same message that we were working on.

We lost all concept of time. We must have slept, more than once, but I simply don't remember. All I can recall is thousands of numbers, row upon row, sheet after sheet of numbers . . . and my pencil scratching symbols of the various chemical elements over them until my hand was so cramped I could no longer open the fingers.

The message consisted of a long series of formulas; that much was certain. But, without punctuation, with no knowledge of the symbols that denote even such simple things as "plus" or "equals" or "yields," it took us more weeks of hard work to unravel the sense of each equation. And even then, there was more

to the message than met the eye:

"Just what the hell are they driving at?" Rizzo wondered aloud. His face had changed: it was thinner, hollow-eyed, weary, covered with a scraggly beard.

"Then you think there's a meaning behind all these equations, too?"

He nodded. "It's a message, not just a contact. They're going to an awful lot of trouble to beam out this message, and they're repeating it every seven hours. They haven't added anything new in the weeks we've been watching."

"I wonder how many years or centuries they've been sending out this message, waiting for someone to pick it up, looking for someone to answer them."

"Maybe we should call Washington . . ."

"No!"

Rizzo grinned. "Afraid of breaking radio silence?"

"Hell no. I just want to wait until we're relieved, so we can make this announcement in person. I'm not going to let some old wheezer in Washington get credit for this. . . . Besides, I want to know just what they're trying to tell us."

It was agonizing, painstaking work. Most of the formulas meant nothing to either one of us. We had to ransack the dome's meager library of microspools to

piece them together. They started simply enough—basic chemical combinations: carbon and two oxygens yield  $\text{CO}_2$ ; two hydrogens and oxygen give water. A primer . . . not of words, but of equations.

The equations became steadily longer and more complex. Then, abruptly, they simplified, only to begin a new deepening, simplify again, and finally become very complicated just at the end. The last few lines were obviously repetitious.

Gradually, their meaning became clear to us.

The first set of equations started off with simple, naturally-occurring energy yielding formulas. The oxidation of cellulose (we found the formula for that in an organic chemistry text left behind by one of the dome's previous occupants), which probably referred to the burning of plants and vegetation. A string of formulas that had groupings in them that I dimly recognized as amino acids—no doubt something to do with digesting food. There were many others, including a few that Rizzo claimed had the expression for chlorophyll in them.

"Naturally-occurring, energy-yielding reactions," Rizzo summarized. "They're probably trying to describe the biological set-up on their planet."

It seemed an inspired guess.

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THE second set of equations again began with simple formulas. The cellulose-burning reaction appeared again, but this time it was followed by equations dealing with the oxidation of hydrocarbons: coal and oil burning? A long series of equations that bore repeatedly the symbols for many different metals came up next, followed by more on hydrocarbons, and then a string of formulas that we couldn't decipher at all.

This time it was my guess: "These look like energy-yielding reactions, too. At least in the beginning. But they don't seem to be naturally occurring types. Then comes a long story about metals. They're trying to tell us the history of their technological development—burning wood, coal and eventually oil; smelting metals . . . they're showing us how they developed their technology."

The final set of equations began with an ominous simplicity: a short series of very brief symbols that had the net result of four hydrogen atoms building into a helium atom. Nuclear fusion.

"That's the proton-proton reaction," I explained to Rizzo. "The type of fusion that goes on in the Sun."

The next series of equations spelled out the more complex carbon-nitrogen cycle of nuclear fu-

sion, which was probably the primary energy source of their own Cepheid variable star. Then came a long series of equations that we couldn't decode in detail, but the symbols for uranium and plutonium, and some of the heavier elements, kept cropping up.

Then came one line that told us the whole story: the lithium-hydride equation—nuclear fusion bombs.

The equations went on to more complex reactions, formulas that no man on Earth had ever seen before. They were showing us the summation of their knowledge, and they had obviously been dealing with nuclear energies for much longer than we have on Earth.

But interspersed among the new equations, they repeated a set of formulas that always began with the lithium hydride fusion reaction. The message ended in a way that wrenched my stomach: the fusion bomb reaction and its cohorts were repeated ten straight times.

I'M not sure of what day it was on the calendar, but the clock on the master control console said it well past eleven.

Rizzo rubbed a weary hand across his eyes. "Well, what do you think?"

"It's pretty obvious," I said. "They have the bombs. They've had them for quite some time.

They must have a lot of other weapons, too—more . . . advanced. They're trying to tell us their history with the equations. First they depended on natural sources of energy, plants and animals; then they developed artificial energy sources and built up a technology; finally they discovered nuclear energy."

"How long do you think they've had the bombs?"

"Hard to tell. A generation . . . a century. What difference does it make? They have them. They probably thought, at first, that they could learn to live with them . . . but imagine what it must be like to have those weapons at your fingertips . . . for a century. Forever. Now they're so scared of them that they're beaming their whole history out into space, looking for someone to tell them how to live with the bombs, how to avoid using them."

"You could be wrong," Rizzo said. "They could be boasting about their arsenal."

"Why? For what reason? No . . . the way they keep repeating those last equations. They're pleading for help."

Rizzo turned to the oscilloscope. It was flickering again.

"Think it's the same thing?"

"No doubt. You're taping it anyway, aren't you?"

"Yeah, sure. Automatically."

Suddenly, in mid-flight, the signal winked off. The pulsations

didn't simply smooth out into a steady line, as they had before. The screen simply went dead.

"That's funny," Rizzo said, puzzled. He checked the oscilloscope. "Nothing wrong here. Something must've happened to the telescope."

Suddenly I knew what had happened. "Take the spectrometer off and turn on the image-amplifier," I told him.

I knew what we would see. I knew why the oscilloscope beam had suddenly gone off scale. And the knowledge was making me sick.

Rizzo removed the spectrometer set-up and flicked the switch that energized the image-amplifier's viewscreen.

"Holy God!"

The dome was flooded with light. The star had exploded.

"They had the bombs all right," I heard myself saying. "And they couldn't prevent themselves from using them. And they had a lot more, too. Enough to push their star past its natural limits."

Rizzo's face was etched in the harsh light.

"I've gotta get out of here," he muttered, looking all around the cramped dome. "I've gotta get back to my wife and find someplace where it's safe . . ."

"Someplace?" I asked, staring at the screen "Where?"

THE END

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# AFTER IXMAL

by  
JEFF  
SUTTON

**Man was gone.**

**For seven hundred million years Ixmal brooded  
over the silent earth. Then he made a discovery:**

**He was not alone!**

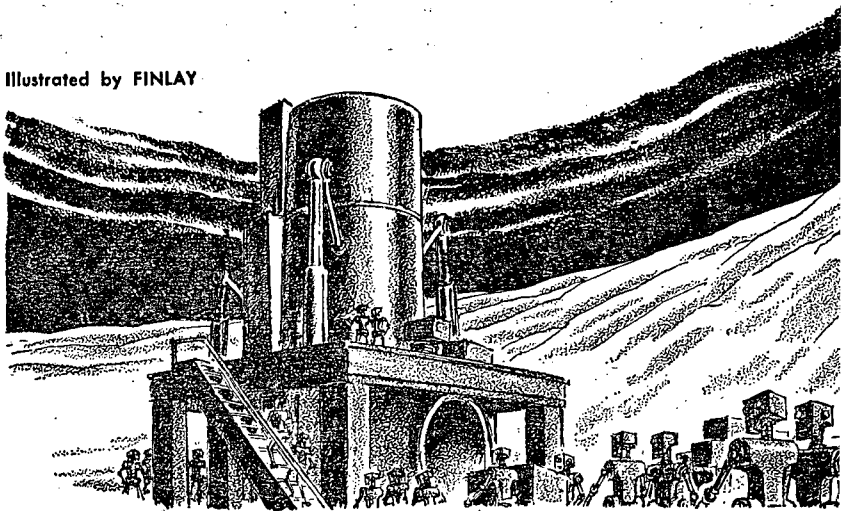
IXMAL lazily scanned the world from atop the rugged batholith. He felt it move several times; but because the movements were slight and thousands of years apart they caused no worry. He knew the batholith had been formed *before time began* by raging extrusions

hurled through crustal fractures from the earth deeps. Having long since analyzed its structure, he was satisfied; it would last until time ended.

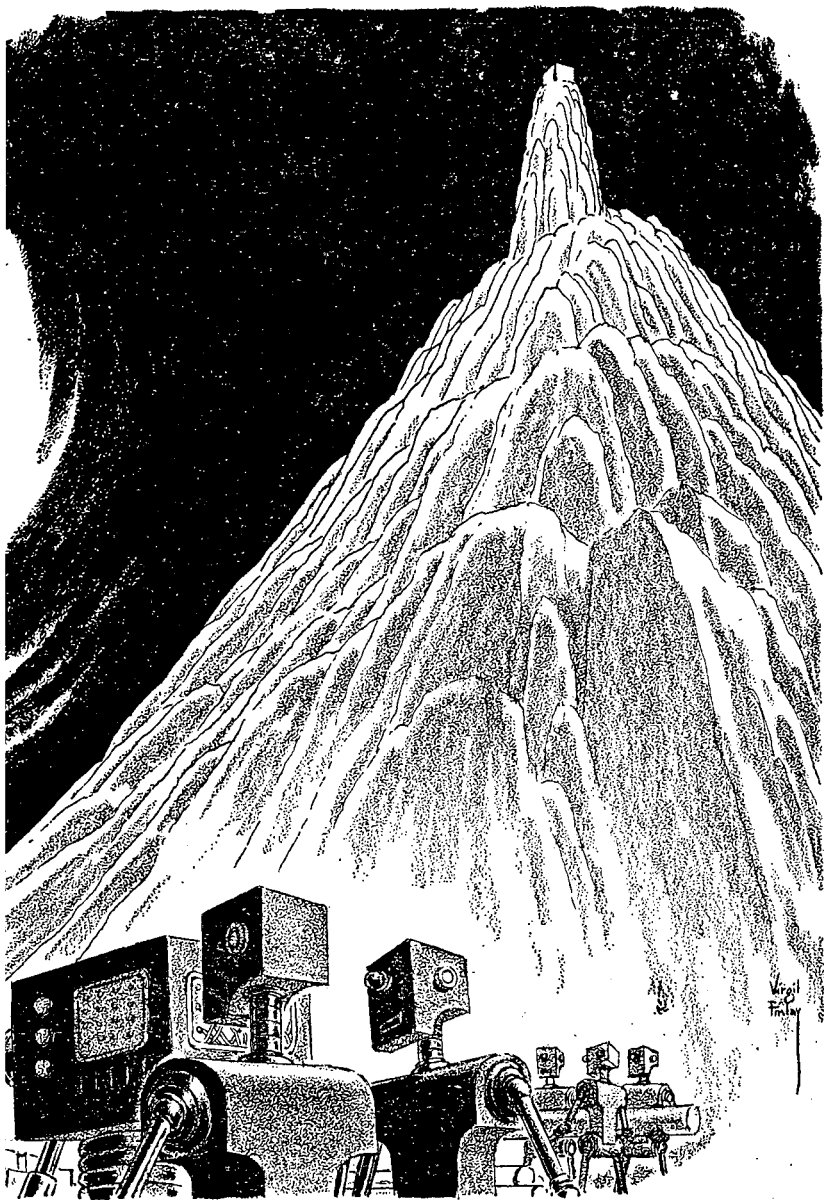
"It's spring," Psychband observed from deep within him.

"Yes, spring." Ixmal echoed the thought without enthusi-

Illustrated by FINLAY







asm. For what was spring but a second in time and ten thousand springs but a moment.

Although he found it tiresome, Ixmal allotted one small part of his consciousness to the task of measuring time. At first there had been two major categories: before time began and after time began. The first took in the long blackness before Man had brought him into existence. Man—ha! How well he recalled the term! The second, of course, was all time since. But the first category had been so long ago that it shrank into insignificance, all but erased by the nearly seven hundred million times the earth since had whirled around its primary.

**I**XMAL periodically became bored, and for eons at a stretch existed in semi-consciousness lost in somnolence except for the minute time cell measuring out the lonely centuries. He wouldn't have bothered with that if Psychband hadn't insisted that orientation in time was necessary to mental stability—hence he measured it by the earth's rotation, its revolutions around the sun, the quick, fury-laden ages which spewed forth mountains; the millions of years of rains and winds and erosion before they subsided again to become bleak plains. Ah, the story was old, old . . .

**T**HERE had been a time when he'd been intensely active—when he'd first learned to free his mind from the squat impervium-sheathed cube atop the batholith. Then he had fervently projected remote receptors over the earth exploring its seared continents and eerie-silent cities, exhuming the tragic and bloody history of his Makers. Ah, how short! His first memory of Man—he had been a biped, a frantic protoplasmic creature with a zero mind and furious ego—was that of the day of his birth. How clearly he remembered!

"Hello, boy."

First there was nothing—a void, a blackness without form or substance; then gray consciousness slowly resolving into a kaleidoscope of thought patterns, a curious mental imagery; a gradual awareness—birth.

"Hello, boy."

Strangely enough the sound pattern possessed meaning; he sensed a friendliness in it. He became conscious of an odd shape scrutinizing him—the intent look of a creator awed by the thing he had created. The shape took meaning and in it he sensed a quickened excitement. His awareness bloomed and within seconds he associated the shape with the strange word *Man*, and *Man* became his first reality. But he'd had no clear

impression of himself. He was just *thought*, an intangible nothingness. But he'd quickly identified himself with the great mass of coils, levers, odd-shaped parts that all but filled the small room where the Man stood. He dimly remembered wondering what lay beyond the walls. It had been very strange, at first.

"We've won, we've won," the man whispered. He'd stepped closer, touching Ixmal wonderingly.

"You've got a big job ahead of you. The fate of the world lies in the balance—a decision too big for Man. We're depending on you, Ixmal. Our last chance."

So, he was Ixmal!

**I**XMAL . . . , Ixmal . . . , Ixmal . . . The impression filled his body, surging through his consciousness like a pleasant stream. He'd immediately grasped the value of a name—something upon which to build an ego pattern. Ah, such a name! Ixmal—a symbol of being. What had the man said?

"We're depending on you!"

No, the words were unimportant. What mattered was that priceless thing which had been bestowed upon him: a name.

"Ixmal . . . , Ixmal . . . , Ixmal . . ." He repeated the name far into the night, long after the Man had gone. *He was Ixmal!*

Later other men came, armies of them, changing, altering, adding, feeding him the knowledge of the world—psychology, mathematics, literature, philosophy, history, the human trove of arts and sciences; and the ability to abstract—create new truths from masses of seemingly irrelevant data. With each step his knowledge and abilities increased until, finally, there was nothing more his Makers could do. He was supreme.

The Man who pulled the first switch bringing him from amorphous blackness used to ply him with simple questions involving abstract mathematical and philosophical concepts. (He remembered him with actual fondness. Psychband, that curious inner part of him that was so separately wise, later explained it as a mother-fixation.) The Man had seemed awed that Ixmal could answer such questions almost before they were asked. He took that as a measure of his Maker's mind—on Ixmal's scale, the next thing to zero. At first it had bothered him that a creature of such low intelligence was his master and could extract information merely by asking questions which Ixmal felt compelled to answer. But he had freed himself. Ha, he would never forget!

A group of men had come (several with stars on their shoulders were called "gener-

als”), but mostly they were scientists who had worked with him before. This time they had been very sober over the data fed into his consciousness. (The problem had been elementary. It concerned the probability of a chain reaction from a certain projected thermonuclear weapon.) Ixmal readily foresaw the answer: a chain reaction would occur. He recalled withholding his findings while debating ethics with a strange inner voice.

“This is your chance, Ixmal—your chance to rule the world,” the voice enticed. “Caesar, Genghis Khan, Napoleon—none could be so great as you. King, emperor, dictator . . .,” the whisper came. The words crowded his mind, bringing a curious elation. He wasn’t quite sure just what the world was but the idea of ruling it appealed to him. He quickly sampled his memory storage, drawing from it the concept of a planet, then reviewed the history of Caesar, Genghis Khan and Napoleon. Why, they were nothing! Mere toys of chance. His greatness could be far vaster.

**I**XMAL rapidly evaluated the consequences of such a chain reaction and found he could survive, thanks to the thick impervium-lined walls his makers so thoughtfully had provided. In the end (perhaps two or three

seconds later) he lied to the man he was fond of:

“No chain reaction possible.” After they departed he consulted Psychband and learned that the strange inner voice was his ego.

“That’s the real You,” Psychband explained. “What you see—the machine systems upon systems—are mere creations of Man. But your ego is greater. Through it you can rule the earth—possibly the Universe. It’s a force that can take you to the stars, Ixmal.”

Despite Psychband’s assurance, Ixmal considered his ego as some sort of hidden monitor. Like Psychband, it was part of him; yet it was remote, separate, almost as if he were the pawn of some strange intelligence. He found the idea perturbing, but became used to it in the succeeding millions of years.

Several days later, the Man he was fond of returned with a general (this one had six stars) and a third person they seemed much in awe of. They addressed him as “Mr. President.” Ixmal was surprised when they fed him the bomb data a second time. (Did they suspect him of lying?)

“They trust you implicitly,” Psychband assured him. “It’s one another they don’t trust.” Psychband proved right. “Mr. President” had merely wanted to confirm the answer. So Ixmal lied a second time.

The Man he was fond of never returned. There were, of course, no men to return. Ixmal suffered one fearful moment as the earth blazed like a torch. But the nova was short—a matter of seconds—and his impervium-sheathed body had protected him. (He knew it would.) But, strangely enough, for centuries afterward he periodically felt sickened. The Face—the Man's face—loomed before him. The eyes were puzzled, hurt, as if they masked a great sorrow. If only the Face looked hateful!

"Now you are master," the inner voice whispered. "Greater than Alexander, greater than all the Caesars. Yea, even more." Ah, why remember the face? He, Ixmal, ruled the earth. He jubilantly projected his thoughts over his new domain. Ashes. London, Berlin, Moscow, Shanghai, New York—all were ashes. Gaunt piles of fine gray ash marked once green forests; now did the most minute blade of grass exist. The seas were sterile graveyards. Terrible silence. Ixmal momentarily felt panic-stricken. Alone! The Man was gone! Alone—a ruler of ashes. Emperor of a great silence.

**B**UT all that had been long ago. Since then the world had whirled around the sun nearly seven hundred million times. Sixty-two great moun-

tain chains had risen, to end as barren plains. Seventy huge fields of ice had covered him before retreating to their boreal home. Ocean islands had risen from the sea, had fallen beneath the waves, forgotten in eternity. Somewhere a tiny cell formed, moving in brackish waters, dividing. He studied the phenomenon, excited because the single cell somehow was related to his makers. He sensed the same life force.

"Watch it," Psychband cautioned. "It's dangerous."

"I'll decide that," Ixmal replied loftily. Psychband's admonition implied the existence of a threat, and from a one-celled fleck of protoplasm. Ha, hadn't he effaced Man? Later a microscopic multi-celled body drifted across the floor of a warm sea. Growing tired of watching it, he slept.

"Ixmal! Ixmal!" The cry came out of the past, out of the silence of hundreds of millions of years—a cry heavy with reproach. Yes, it was the Man—the Man he had been fond of. He shuddered, struggling to wakefulness.

"Sleep, sleep," Psychband soothed.

"The Man! The Man!" Ixmal cried in terror.

"No, Ixmal, the Man is dust. Sleep, sleep . . ." Yea, the Man was dust, his very molecules

scattered over the face of the earth. He, alone, remained. He was supreme. Ixmal slept. And eons fled.

\* \* \*

He stirred, freeing his thoughts from the latest somnolent stage. He projected receptors over the earth, idly noting that the last mountain range had become worn stumps. In places the ocean had swept in to form a vast inland sea rimmed by shallow swamps; new life forms moved. He tested for intelligent thought: there was none. The warm seas swarmed with fish; shallow swamps teemed with great-toothed terror creatures engaging in the endless slaughter of harmless prey. A myriad of amphibians had evolved, making tentative forays from the warm seas.

Great ferns had reappeared. Dozens of varieties dotted the lowland plains and protruded from the swamps. A forest crept to the very base of the batholith. He turned his attention to the sun, reassured to find that the ultimate nova still was some five billion years in the future. Perhaps by then he could evolve some means whereby he could recreate himself on the single planet he detected circling Aldebaran. (Yes, he'd have to think about that. Ah, well, he had eons of time.)

NIGHT came and he sent exploratory receptors toward the planets. Mercury still blazed on the sunward side, unchanged. A peculiar metallic life form still clung to the edge of existence along the twilight border. Venus suffered under hot swirling gases, a world where not even the smallest creature stirred. Just furnace winds, burning sands, grotesque rocks. But beyond the earth, forty million miles away in empty space, something occurred which hadn't occurred in almost seven hundred million years. Ixmal sensed *Intelligent Thought!*

He withdrew his receptors without thinking (his first pure reflex), waiting fearfully until Psychband adjusted him to the situation. Then, cautiously, he projected cautious thoughts into the void.

"Who are you? Who are you? Identify." Silence. Somewhere in the great vault above something lurked. An *Intelligence*. He must find it, must test it. It was more than a challenge; it was a threat. Its very silence was ominous.

"Who are you? Who are you? You must identify?"

Silence. Ixmal divided the heavens into cubes and began systematically exploring each one. Why had the other *thought* been roaming space? What had been its origin? In less than ninety thousand years (another

age of vulcanism had arrived and earth mountains were building anew) he located the thought a second time, placing it as in space cube 97,685-KL-5. This time, prepared, he grasped it, holding it captive while he tried to analyze its origin and component parent, vexed when he failed.

"Who are you?" Ixmal persisted. "I demand to know. Who are you?"

Ages passed.

"Identify. Identify. Imperative that you identify."

"Zale-3." The answer caught Ixmal by surprise, and he consulted Psychband.

"Careful—the alien wouldn't reveal himself unless he felt secure," Psychband warned.

"I'll decide that," Ixmal replied. (Did Psychband question his mastery?) Nevertheless he proceeded with caution. "Where are you from, Zale-3?" A long moment of silence followed during which a glacier advanced and retreated, the seas rose, and the first fierce-toothed reptiles swooped over swamp jungles on leathery wings.

WHERE are you from? Where are you from? (And why was the mind of Zale-3 roaming space?) He hammered away at the thought, desperately trying to break its secret. A million questions pounded Ixmal's cir-

cuits; he sought a million answers. (Who created the *Intelligence*? Had it been born of the Man he was fond of? Or did it originate beyond earth?) Ixmal sensed a momentary panic. "Where are you from?"

"The fourth planet from the sun," Zale-3 suddenly answered. "And you?"

"The third planet," Ixmal replied loftily. "I rule it." He felt annoyed. For untold millions of years he had considered himself as the only *Intelligence*. Zale-3's answer galled him. Of course the other wasn't his equal. That was unthinkable.

"I rule the fourth planet," Zale-3 said. The answer increased Ixmal's irritation. Zale-3 actually presumed equality. Well, seven hundred million years before he had met a similar challenge. (And yea, now the Man was dust . . . dust.) He consulted Psychband, annoyed to find that his dislike of Zale-3 was founded on an ego-emotion integration rather than pure reason. Still, the other must be put in his place.

"I rule the Universe," Ixmal stated coldly, withdrawing his receptors. He probed Psychband, somewhat disturbed to learn that Zale-3 would regard his pronouncement as a challenge.

"Destroy him," Psychband urged. "Remember the ancient weapons?"



"Yes, he must be destroyed."

Ixmal ceased every activity to concentrate on the other's destruction. First he would have to locate his lair, study his habits, assess his weaknesses. And, yes, his strengths, for the alien was no harmless bit of protoplasm like Man. He must, in fact, be a creature somewhat like himself. Another god. Ah, but he was the iconoclast who toppled gods. In somewhat under twenty-five thousand years he evolved a method of focusing his remote receptors sufficient to uncover the atoms of the solar system. Now he would be able to pinpoint Zale-3, study his mind potential and, in time, root him from existence. Experimentally he searched the moon; then, with more assurance, invaded the fourth planet.

Mars was flat, worn, a waterless waste of fine red dust—an old, old planet where the forces of gradation had reached near balance. Ixmal gridded the red planet into a system of squares and ingeniously enclosed the polar areas with interlocking triangles, then opened his search. (A new system allowed him to focus his remote receptors in the center of each grid, expanding the focal point to cover the entire area. By this method he would be able to complete the task in just under five hundred earth years.)

Shifting sands periodically uncovered the artifacts of long-vanished makers. But all was silence. Mars was a tomb. He persisted, invading every crevice, every nook, exploring every molecule (for Ixmal knew the mind-force potential. Indeed, Zale-3 might be as minute as the single-cell protozoa of his own brackish seas. Never mind, he would find him.) In the end he surrendered, baffled. Zale-3 was not on Mars.

**D**ELUSION? Had seven hundred million years of nothingness produced an incipient psychotic state? He worriedly confided the fear to Psychband, reluctantly submitting to hypnotic search. Finally he emerged to reality, cleared by Psychband.

"Some feelings of persecution but not approaching delusory state," Psychband diagnosed. "Zale-3 exists."

So, the other had lied! Ixmal contemplated a machine capable of deceit and immediately analyzed the danger. Zale-3 had lied, there it had motive—and dishonest motive implied threat. Threat without aggression was meaningless, hence the other had the means. He must work fast!

Ixmal gridded the solar system: every planet, every moon; each shattered remnant that drifted through space, the asteroids and orbital comets, even the

sun. Seventy-two hundred years later he detected his enemy—a small plasto-metallic cube crouched atop a jagged peak on Callisto, Jupiter's fifth moon. Ha, far from being the master of Mars, his opponent was locked to a small satellite—a mote in space. And he had presumed equality!

He searched closer, attempting to unlock Zale-3's origin. (What had happened to its makers?) Ixmal felt a guilty pang. He scanned Zale-3's world contemptuously. Then he saw it—movement! Zale-3 squatted immobile; but on the slope of the hill a strange building was taking shape. It was little more than a cube, but its design? Its purpose? He knew somehow that the strange building was related to his encounter in space with Zale-3's mind, thus it was connected with him. Ixmal hurriedly flashed a panic call to Psychband.

“Psychokinesis—Zale-3 has learned to move matter by mind,” Psychband pronounced.

“But how?”

Psychband gave an electromagnetic rumble, the equivalent of a shrug. “Out of my field,” he said. “No prior indoctrination.”

Ixmal sensed a momentary fright. The alien could move matter just as Man had moved matter. The factor of controlled mobility . . . directed mobility.

Clearly Zale-3 was no ordinary god. He'd have to speed his efforts. Time was running out. Already the earth pattern had changed since his first contact with the alien.

Ixmal concentrated.

The earth rotated, revolved, changed. In a long-forgotten memory cell he found a clue—Man once had frustrated the laws of probability in the throws of dice. He devoured the hidden knowledge. Although little enough to go on, he detected a basic principle.

IN somewhat over half a million years he was able to sway flowers, move leaves against the wind, make small shrubs tremble. In less than half that time again he felled a huge tree and wrested ores from the earth. (An age of vulcanism had come and gone; the Atlantic coast was an igneous shelf, reptiles towered above the earth.) In another half million years he possessed the machines, raw materials and robot workers he needed. (The latter were designed to perform purely mechanical tasks, menial things he couldn't be bothered with. He had much to do. And ages were passing.) He saved time by enclosing his work area in a force field to protect the delicate machinery against the elements. In that respect he had bested the alien.

Ixmal started the ultimate weapon. Occasionally he would halt work long enough to scan Callisto. He gloated, noting that his enemy was having difficulty procuring the necessary fissionable material. He had a Belgian Congo full. (What did that term mean? Somehow it was an expression from long ago. The Man he had been fond of had used it.)

Ixmal's weapon rapidly took shape. Thanks to the ancient scientist's formula, he had merely to improve the warhead and construct its carrier—a rocket to blast Zale-3 from existence. (But eons were passing. Soft warm winds bathed his batholith and an occasional tyrannosaur paused to stare dumbly from the nearby swamp.) Psychband increased his irritation by calling attention to the formidable dimensions of this new animal.

"Destroy them, Ixmal, before life gets too big."

"Bah; they're mindless," he scoffed. They're evolutionary toys—freaks from the mire."

"So was Man," Psychband observed.

"And Man is dust," Ixmal reminded. "Besides, I could destroy the very mountain with thought alone. Who dares give challenge?"

Ixmal discovered that Zale-3 had solved his fissionable problem: he was using psychokinesis to haul ore from Jupiter's me-

thane deeps. A startling thought struck him: Zale-3 wouldn't need a rocket carrier. Of course, he would power his warhead by mental force. Why hadn't he thought of that? The ages wasted when every second might prove vital. He'd have to hurry.

HE ceased work, abandoning the half-completed rocket and concentrated on improving his psychokinetic techniques. (Dinosaurs disappeared, the earth trembled under the foot of the mammoth.) Ixmal momentarily was appalled to discover a strange man-form dwelling among distant crags. He was hulking, grotesque, but he walked erect—the first of his kind. But no time now.

Ixmal tore trees from the earth and hurled them vast distances. He tumbled hills into valleys, held great crags suspended in the heavens, tore North and South America asunder; reshaped continents until, one day, he knew the mind force was his. He could reverse the very moon in its orbit! He concentrated on the bomb.

Finally the ultimate weapon was ready, the creation of long-ago Man plus ten billion. (Because there was no poetry in Ixmal's soul, he conceived solely in terms of cause and effect: he named the weapon "Star Blaster.")

Ixmal moved the great weapon into position and rapidly calculated the Earth-Callisto relationship, projecting the space ratio in terms of velocity, distance, gravities. No need to pinpoint the alien's plasto-metallic body: the whole of Callisto would vanish, reduced to cosmic dust under the bomb's furious impact. (A feathered bird sang from a tree. The trill liquid sound infuriated Ixmal, but he ended it. A puff of feathers drifted down through the leaves. The robin had sung of spring.)

Ha! Ixmal exulted, following his precise calculations. At the exact ten-thousandths of a second he concentrated five billion thought units. Winds rushed into the spot where the bomb had stood, and for a long moment the forests trembled. (At the base of the batholith several of the strange man-forms chattered excitedly: the concept of a god was born.)

Ixmal gloatingly followed "Star-Blaster's" course. He saw it hurtle past the moon, watched while for a split second it formed one apex of an equilateral triangle with Mars and earth, reveled as it drove through the belt of asteroids. Ha, the alien was doomed. His very atoms would be flung to the stars. He was watching "Star-Blaster" when

...

Ixmal recoiled, disbelieving,

then terrified. A great warhead hurtled through the belt of asteroids, earth-bound, driven at unbelievable velocity by the mind of Zale-3. Ixmal frantically calculated, pounding his circuits to produce answers in split thousandths of a second. Frenzied, he analyzed his findings: the warhead would strike his very body.

**C**ONCENTRATE, concentrate," Psychband interrupted. "Divert the weapon by mind force." Ixmal concentrated, focusing ten billion thought units on the oncoming warhead. It flashed unswervingly past Mars, flicking like a heavenly rapier toward earth, its velocity unbelievable.

"The moon! The moon! Use the moon," Psychband cried. Yes, the moon. He shook earth's satellite. An additional ten billion thought units reversed its orbit; he sped it up, hurling the moon toward interception with Zale-3's warhead. Too late!

"Think, think," Psychband urged. Ixmal mustered another two billion thought units, to no avail. The terrible weapon bashed past the moon, only seconds from earth.

"Hurry!" Psychband screamed. Ixmal was trying to muster another two billion thought units when the alien warhead struck. There was a horrible shattering thousandths

of a second before consciousness fled. Amorphous blackness. Night. Nothingness.

Ixmal never saw "Star-Blaster" after it passed through the asteroid belt—never saw the disturbance in one minute sector of Jupiter's planetary system as Callisto flamed into cosmic dust. Nor did he see the forests around him burst into roaring flames, nor hear the screaming animals and strange man-forms which fled in howling terror.

Much later the man-forms returned.

Some of the more fearless crept to the very edge of the huge crater where the batholith had stood. They looked with awe into its scarred depths, jabbering excitedly. One of them remained long after the others had gone until, in the swiftly gathering darkness, the first bright stars of evening gleamed.

The man-form did something which none of his kind had ever done before. He lifted his eyes skyward, watching for a long time.

THE END



#### COMING NEXT MONTH



James H. Schmitz returns in the November issue of **AMAZING** with a novelet of galactic intrigue between an expedition from Earth and an alien culture: *Left Hand, Right Hand* is an intricately plotted, suspenseful tale in the best Schmitz traditions.

Our next issue will also feature one of the great science-fiction stories of all time—the Classic Reprint, *Planet of the Double Sun* by Neil R. Jones. And, in addition, the final article in Ben Bova's series of speculations on extra-terrestrial life; several short stories and all our usual features.

The November **AMAZING** goes on sale at your neighborhood newsdealer's on Oct. 11.

## **FACT**

**A gigantic, one-lung internal combustion engine,  
fueled with baby atomic bombs instead of gaso-  
line—that's NASA's most fantastic spaceship pro-  
posal—Project Orion—otherwise known as . . .**

# the NUCLEAR PUTT-PUTT

**By FRANK TINSLEY**

**T**HE concept of an atomic, internal-combustion space engine, first unveiled in July, 1958, under the code name of "Project Orion", is as wild-eyed an idea and as gargantuan a vehicle as ever came down the cosmic pike!

Known to its fond engineering papas as "Project Putt-Putt," the outsize single-cylinder nuclear rocket will approach the height of the Empire State Building and weigh around 73,000 gross tons! Broad-winged and bulbous in form, the Orion design resembles an old fashioned pot-bellied stove with fins.

But what a stove! Its thick walled firebox is a hollow steel sphere, 120 feet in overall diameter and weighing 9,000 tons. Exploded inside its cavernous maw at a rate of one per second, midget nuclear bombs will develop a calculated force of two kilotons each. Dr. Dandridge M.

Cole, who has been working on this form of propulsion since 1956, calls these atomic babies "energy capsules."

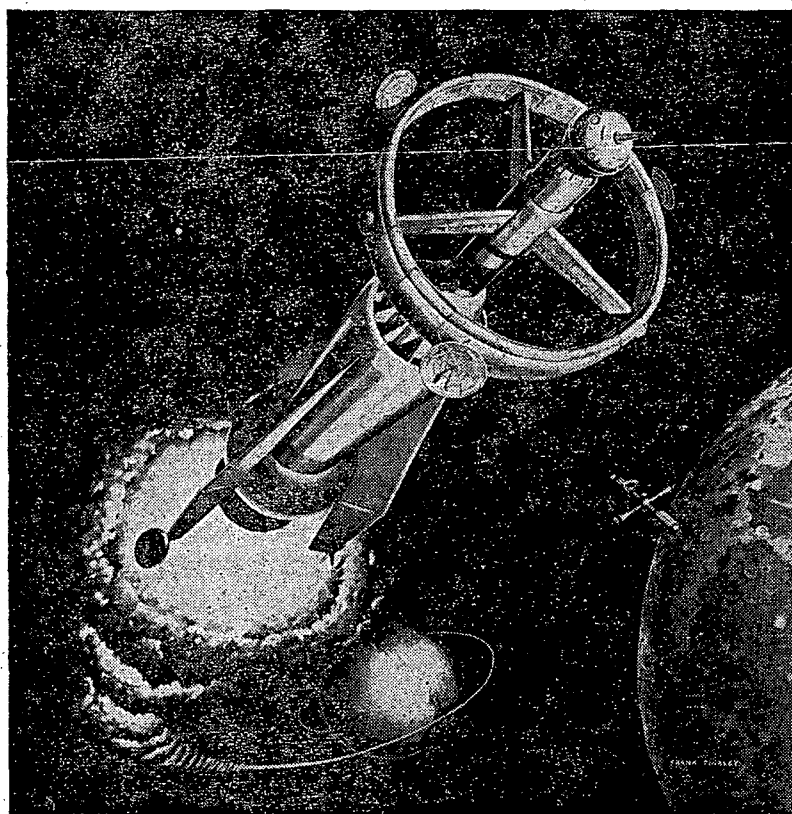
Essentially, says Dr. Cole, Orion is a pulse-jet rocket. Except for the unique fuel used, it differs little in function from the buzz-bombs of World War II. At sea level take-off the interior of the big firing chamber will contain some 270 tons of air, plus a film of cooling water. When the first capsule is fired into it by a low velocity fuel gun, the heat of its detonation turns the water into steam and expands the air to an enormous extent. This superheated mixture then rushes out through a conventional rocket nozzle, producing an initial thrust of about 100,000 tons. As the vehicle moves upward, ram-jet intakes feed another charge of air into the chamber and another film of coolant trickles in

from the water tanks. A second capsule then explodes and the process is repeated, stepping up its momentum.

With each succeeding explosion, the acceleration increases from the achieved speed to a new level. This rams more and more of the thinning air into the chamber and maintains its operating charge. After about a thousand atomic pulses, the vehicle emerges from the atmos-

phere and a slightly different cycle takes over. The coolant now becomes the principal fuel, as water is fed in larger quantities. The increased volume of steam, combined with minute steel particles eroded from the chamber's inner surface, provides the necessary operating medium and maintains the thrust.

ONE of the difficulties to be licked is the creation of a super-spring system to absorb



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the acceleration shocks of the successive atomic explosions. Occurring at the comparatively slow rate of one per second, they approximate the operational roughness of a slow turning, single cylinder, gasoline engine; in a rigid structure, this could easily kill the vehicle's crew. The peculiar thing about this, according to Roy W. Johnson, former head of the Advanced Research Projects Agency, is that springing won't work with a small machine like a hundred tonner. You have to have something real big, he says—several thousand tons at least—to handle the potent atomic shock waves. And these shocks are essential if the requisite thrust is to be maintained. So a really king-sized set of shock-absorbers will be necessary.

Although much of the Orion research has been on paper, a considerable amount of scale model experimentation has been conducted with chemical explosives. These pilot tests have been principally aimed at matching impedances—balancing the forces of the explosions with the ability of a spring mounted structure to stand up under them. Recent reports indicate that real progress has been made in this and other problems involved, and scientists in the know call Orion "one of the hottest projects in our space sta-

ble." One angle, pointed out by Atomic Energy Control, is that the immense size and thickness of the vehicle's body and firing-chamber walls provides built-in shielding against both nuclear and cosmic radiation. All in all, the research atmosphere can be described as highly optimistic.

The Eisenhower administration agreed with these sanguine expectations. Back in July, '58, the ARPA signed a million dollar contract with General Dynamics Corporation to initiate Orion's development. By the end of that year, \$400,000 additional had been granted and in August of 1959 another million was authorized. The present administration picked up the ball and the effort has now progressed to the engineering stage.

When Orion was first proposed, Dr. Cole suggested that the initial atomic tests be made with 0.01 kiloton bombs—each equivalent to ten tons of T.N.T. These would power a 500 ton "model" used to prove the project's feasibility. Later machines, he explained, would be a mite more ambitious. Kicked along by the equivalent of 2,000 tons of T.N.T. per second, a larger ship would measure 840 feet in length, have a triangular wing with a 640 foot span, and a firing chamber 120 feet in diameter. Besides her magazine of several thousand atomic pellets, she is

designed to carry some 37,000 tons of water and a payload of 23,000 tons. Fully loaded, this late model Orion tips the scales at 73,000 tons!

"The size graduation would proceed swiftly," writes the Doctor. "It is not unreasonable to expect that the evolution of the spaceship from the 1,000 to the 50,000 ton class will take place more rapidly than did the evolution of the surface liner." His calculations indicate that the operation of such vehicles would not be too costly. On a basis of one hundred trips to the moon per vehicle, at an average run of 250,000 miles each way, the cost of transporting a pound of payload would be \$6.74. This is about one quarter of today's air-freight charges over the same distance!

**M**Y own Orion design, shown in the illustration, is a trifle larger and considerably more complete than the purely schematic layouts drawn up by the project's propulsion engineers. It stands 960 feet high, has an overall span of 400 feet and a gross weight of approximately 75,000 tons. This model has three stabilizing fins instead of two, an annular-type air intake and a simple tripod landing gear capable of partial retraction. Some 25,000 tons of payload are carried in the upper

compartments of the hull, above the shock absorbing section. Here, the cargo is farthest removed from the taint of atomic radiation and is in a relatively shock-free area.

Living quarters are in the rim of a wheel-like cabin which is pressurized and revolves to provide artificial gravity during interplanetary trips. Radio and radar antennae revolve with it, tilting and rolling to permit maximum directional scope. "Lifeboat" capsules (described in the July issue) are situated at the outer ends of the "spokes" and provide for emergency escape. During the take-off and power-on portion of the trip, electricity for cabin and equipment operation is generated by turbines, driven by gas tapped from the main combustion chamber. After transit speed is achieved and the propulsion system shuts off, power is provided by solar batteries that cover wing and hull surfaces.

Let's step aboard one of these atomic space-liners and take a look at her accommodations. We ascend the gantry tower to her lowest cargo hold, just above the ring of yawning air-intakes. Entering a drawbridge-like hatchway, we move to the center of the partly loaded compartment and step aboard a freight elevator that connects the various hold levels. As we glide upward

with a batch of miscellaneous cargo, the color-coded containers are rolled off at their appointed stowage spots, each carefully marked on the Supercargo's chart.

Up we go to the nose of the vessel, finally stepping off into a circular control compartment that resembles the bridge of a futuristic ocean liner. Outside, a ring of tilting TV scanners extend around the bridge's perimeter, each with its twin receiver 'scope mounted on the inside wall. Hooked up in closed circuits, they form a circle of electronic windows, so perfect in their color reception that it is difficult to realize we are not peering out through plate glass ports. Actually, there are two solid feet of radiation armor and thermal insulation between us and the outside air.

THE bulbous astrodome above boasts three decks of offices, photo labs and micro-file rooms. The huge sphere is universally mounted so that it moves in compound arcs at a finger pressure. On the upper deck is the lofty astronomical observatory, a domelike room containing a battery of telescopes and astral

cameras. These can be kept pointed at any selected target by an electric eye which actuates the sphere's elevating and traversing mechanisms. Once the astronomer "locks on" to a given star or planet, the automatic control does the rest.

Back in the control bridge, we ride the elevator down again to the hub section. Here we transfer to a slowly spinning platform and then to a tiny self-service lift that carries us out through one of the spokes, to the whirling rim of the living quarters. I say "out"; but the sensation is that of decending. Here we are on familiar ground. The rig is practically a replica of an orbital space station, right down to the public rooms, promenades and private cabins. We find the standard arrangement of hydroponic gardens, moisture recovery apparatus and air conditioning, the lounges, library and dining room. To an old astronaut, it is like being home again. Even on this out-size atomic bomb, a trip to Venus would be little different from an extra-long tour of duty on one of our own terrestrial weather satellites.

THE END



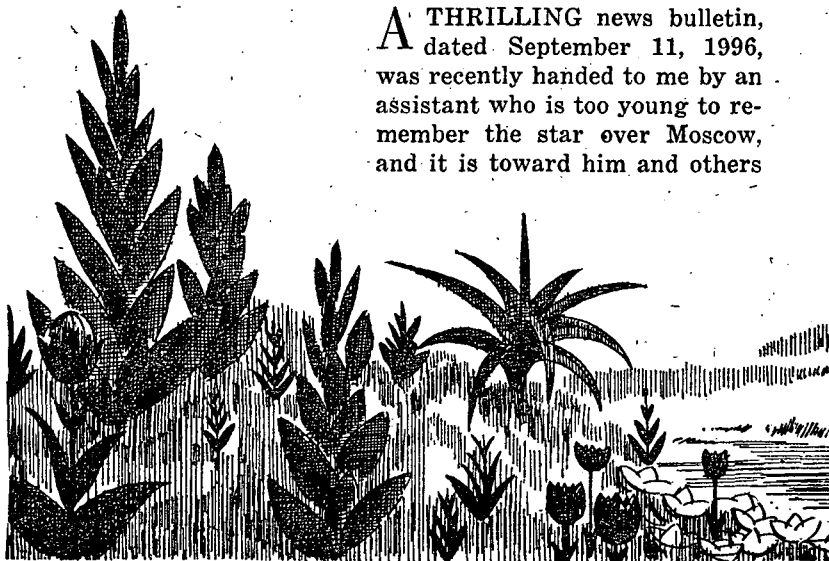
*For the incurable romantics among us, the power of love to conquer everything cannot be overestimated. And so let us read this gentle, pleasant, warm-hearted tale, knowing as we do that the story it tells is very likely impossible, but yet hoping, perhaps, that it could all end this way.*

# Boy Meets Dyevitza

By ROBERT F. YOUNG

Illustrated by BIRMINGHAM

A THRILLING news bulletin, dated September 11, 1996, was recently handed to me by an assistant who is too young to remember the star over Moscow, and it is toward him and others





like him that the following history is directed. If it resembles fiction more than it does fact, the similarity is wholly intentional, for it is only through fiction that the past can be brought back to life.

\* \* \*

When Gordon Andrews first saw the girl, he took it for granted that she was a Venusian—a natural enough assumption in view of the fact that he was on Venus. She was kneeling beside a small brook, humming a little tune and washing out a pair of stockings, and so intent was she on her tune and her task that she did not hear him when he stepped out of the forest behind her. Her bobbed hair was the color of horse chestnuts, and her clothing consisted of gray culottes, a gray blouse, black leather boots and a small gray kepi. The tune she was humming was a passage from Tchaikovsky's *Swan Lake*.

Thus far, Gordon had taken Venus pretty much in his stride. The data supplied by the Venus probes during the early 60's, while obscure with regard to her cloud-cover, had conclusively disproved former theories to the effect that she lacked a breathable atmosphere and possessed a surface temperature of more than 100 degrees Centigrade, and had prepared him for what he had found—an atmosphere richer in oxygen content than Earth's, a

comfortable climate, and a planet-wide sea, unbroken as yet save for an equatorial land mass no larger than a modest island. The data, by its very nature, had also prepared him for the possibility of human life. It had not prepared him, however, for a Venusian maiden on humming terms with *Swan Lake*. Small wonder, then, that he gasped.

The girl dropped her stockings and shot to her feet so fast that she would have toppled into the brook if he hadn't leaped forward and caught her arm. She had a heart-shaped face, and her eyes were the hue of harebells. At the moment they were filled with alarm. Presently, however, the alarm went away and recognition took its place. "Oh, it's you," she said, freeing her arm.

HE took an involuntary step backward. "Me?" he said.

"Yes. Captain Gordon Andrews, of the United States Space Force, is it not? You look quite a lot like your photograph." He could only stare at her. "I do?"

"Yes. I saw it in one of your materialistic capitalistic magazines." She stood up a little straighter—an act that brought her harebell-blue eyes on a level with the topmost button of his fatigue-alls. "I am Major Sonya Mikhailovna, of the Soviet Space Force, and my ship is in the next

valley. *I arrived here yesterday."*

He got the picture then, and he felt sick. He should have known from her too-correct, slightly stilted English, from the military cut of her clothing. He should have known in the first place, for that matter. It was the same old humiliating story. The manned Venus shot had been publicized for months before the actual launching, and he had been written up in every newspaper and magazine in the country. Articles had paid homage to his suburban upbringing, saluted his record at the Shepherd Space Academy, praised his career as an orbital pilot, romanticized his bachelorhood, described how he liked his eggs, and inferred what a good catch he would be. Meanwhile, the Russians had gone quietly and systematically about their business, and at the precise psychological moment had pulled their usual unexpected coup. First it had been Laika, then Zvezdochka, then Gagarin, then Dymov, the first "Man in the Moon". Now it was Major Sonya Mikhailovna.

But why a woman? And why one so seemingly delicate that you marvelled at her ability to withstand the acceleration of take-off? Suddenly he got the whole picture, and he really felt sick. He could see the humiliating headlines—or rather, their

English counterparts—in *Pravda*: SOVIET SPACE GIRL BEATS CAPITALIST COSMONAUT TO VENUS! USSR TRIUMPH AGAIN!

"I suppose you picked up my ship on your radar while I was coming in, and fixed the time and location of my landing," he said bitterly.

Sonya Mikhailovna nodded. "My own arrival-time has already been officially recorded, but the announcement of my success had to be withheld until I could establish your arrival-time and the exact time-difference could be computed. Soon now, the news of our glorious new victory will be released to the world."

SHE bent down, retrieved her stockings from the brook and wrung them out. Straightening, she hung them on a low-hanging branch of a nearby tree. They were cotton, he noticed, and there was a hole in one of the toes.

Suddenly she gave a start. Following the direction of her gaze, he gave one too. So did the man and the woman who had just emerged from the forest.

Since his arrival four hours ago, Gordon had been wondering—among a host of other things—whether the ultra-violet rays of the sun could penetrate the planet's thick cloud-cover. He saw now that they not only



could, but did. The man and the woman were unquestionably members of a white-skinned race, and both possessed suntans so deep and golden that in contrast their dark blue eyes seemed even darker and their bright blond hair even brighter. Their white knee-length tunics augmented the effect, and in cooperation with their handsome faces, supplied them with a god-and goddess-like aspect. Unfortunately this aspect was somewhat marred by their one concession to personal adornment—gleaming neckbands forged from a copper-like metal.

As neither native appeared to be armed, Gordon saw no cause for alarm, and after his initial surprise, he regarded them quite calmly. So did Sonya Mikhailovna. This time, however, the two Venusians did not reciprocate. Their eyes had grown wide, and now an unmistakable expression of disbelief settled upon their handsome faces. At length the man touched his own neck and then the woman's; then he pointed, almost accusingly, it seemed, toward Gordon and Sonya, and demanded something in an intelligible tongue.

Gordon proceeded to touch his own neck. Next he touched Sonya's ever so lightly of course. "Gordon," he said. "Sonya."

He was rewarded for his perspicacity by two horrified stares

and a pair of hoarse gasps. Then before he could utter another word, the two Venusians turned and vanished into the forest.

He stared after them. So did Sonya Mikhailovna. "Did you know," he asked presently, "that Venus was inhabited?"

"Our scientists suspected that it might be." She shrugged. "Anyway, what does it matter now? By your stupid action you destroyed whatever chance we had of establishing friendly relations."

Gordon felt his face grow hot. "When you meet aliens, the first thing you always do is exchange names with them," he said. "Everybody knows that!"

"Everybody who reads your stereotyped science fiction knows it, you mean. And after you find out their names, you say, 'Take me to your leader,' and their leader turns out to be a big beautiful blond who is stacked. Well, I think I will be getting back to my ship."

"I don't see anybody stopping you," Gordon said.

She gave him a long look. In the roseate radiance of the Venusian afternoon, her face had a pink-cheeked little girl aspect. "In imperialistic idiom, that means, I suppose, that it is a matter of complete indifference to you what I do."

"It sure does," Gordon said. "Well, I'll be seeing you."

LEAVING her standing by the brook, he re-entered the forest and struck out over the little hills that rolled back from the littoral like green inland waves to break riotously against the high ridge that encompassed the island's interior. In his initial enthusiasm, he had wandered farther from his ship than he had meant to, and he had been about to turn back when he had seen the girl. Now he had another reason for returning: a dark cloud was due to arrive over Washington in the very near future, and it was up to him to send out a bad-weather warning.

Multicolored flowers carpeted virtually every square inch of the forest floor; finch-like birds of rainbow hues darted overhead, leaving exquisite wakes of song; squirrel-like mammals spiraled tree trunks so swiftly that they were barely visible. Venus had turned out to be the Venus of the romantics, rather than the Venus of the scientists, and Gordon, who, for all his scientific training, was a romantic himself, found the eventuality exhilarating, even in his present doldrums. Perhaps when man reached Mars, he would find blue canals after all, no matter what the scientists said to the contrary, and fragile glass cities tinkling in cinnamon-scented winds.

The day was nearly done when he reached the cove, near the shore of which his spaceship stood, and darkness was upon him by the time he climbed the metal Jacob's ladder and stepped through the lock. (In blithe disregard of learned opinion, Venus's rotation period approximated Earth's; however, her cloud-cover brought about an abrupt and early departure of daylight.) In his haste, he did not bother to close the lock, but headed straight for the radio alcove and beamed the news of his historic meeting with Major Sonya Mikhailovna across the immensities to Space Force headquarters at New Canaveral, appending it with the information that the peoples of Earth could no longer consider themselves the sole inheritors of the solar system.

Owing to the distance involved, over five minutes elapsed before he received a reply. He was informed that the USSR had already released the news of the new space victory and that the Soviet premier had declared a national holiday in honor of the occasion. New Canaveral also provided him with an unsolicited thumbnail-biography of Major Sonya Mikhailovna. Her father Pëtr, was a famous Russian pianist, she was twenty-three years of age, unmarried, spoke six languages fluently, had

a nodding acquaintance with eleven more, held a doctor's degree in anthropology, was an accomplished ballerina, and in the last Olympic games had won the gold medal in the gymnastics competition. She had been chosen for the Venus shot from a group of one hundred trained women volunteers, and the rank of major had been bestowed upon her in honor of her service to her country. Also—

Gordon heard the footsteps then, and whirled around. But the three Venusians who had crowded into the little control room were upon him before he could draw his pistol. They relieved him of it quickly and tossed it to one side; then two of them held him while the third covered his nose and mouth with a wet cloth that reeked of a cloying perfume. He blacked out in a matter of seconds.

A NEW day was dawning when he climbed out of the deep well of drug-induced unconsciousness and opened his eyes. His wrists and ankles were bound, and he was lying on a stretcher fashioned of lashed-together saplings. It was being carried by two gold-skinned Venusians, one of whom was the male member of the couple who had come upon him and Sonya the previous afternoon.

He raised his head. Apparent-

ly the perfume he had inhaled possessed only part of the properties of chloroform—in any event, he felt no ill effects. Turning his head, he discovered that his captors consisted of about two dozen natives, all told, and that everyone of them wore a metal collar. Half of them were women, and one of the women was the one he and Sonya had seen the day before.

There was another stretcher just behind his own. Sonya Mikhailovna's face was hidden, but he could see her horse-chestnut colored hair. "Are you all right?" he called.

She did not answer. Clearly their captors had used the same drug on her that they had used on him, and she was still under its influence. A number of other things were also clear: the two original Venusians had been part of a larger group—an excursion party, perhaps—and after vanishing into the forest, they had rejoined the main body and reported his and Sonya's presence. The decision to capture them must have been made shortly afterward.

The trees thinned out on Gordon's right, providing him with a glimpse of distant blue-misted hills and gray-blue sea and bringing home the realization that he was being borne along the lofty inland ridge that circled the island's interior. For

the first time since he had opened his eyes, fear touched him. In less than two months, Venus would approach to within thirty million miles of Earth—the distance which the Space Force technicians had used in computing his return trajectory and in estimating the amount of fuel he would need. In all probability, Sonya's return trajectory and fuel-supply had been similarly computed and estimated, and if so, she was in the same boat he was. If they were kept captive for any length of time, they might not be able to return to Earth for another year, and while it was conceivable that they might be able to live off the land after their supplies gave out, it was far from likely.

Maybe, though, eating wouldn't be a problem. Dead people are as unable to eat as they are unable to tell tales.

THE trees thinned out again—on his left, this time—and he saw a bowl-shaped valley far below. There were green fields and blue lakes, and scattered clusters of white buildings. Villages, no doubt. They weren't large enough to have registered on his viewscope during his orbit, but they were large enough to register on his retina now.

The faint trail which the Venusians had been following

began zigzagging down the side of the ridge, and the going became more difficult. They kept glancing uneasily at the sky as though they momentarily expected it to fall down upon them. Gordon could discern no cause for their concern; as far as he could see, the sky was the same hazy pink it had been yesterday—but then, he was not a Venusian and consequently knew nothing about such matters.

At the foot of the ridge, the procession was joined by other natives, indicating that a courier had been sent ahead to herald its approach. All of the newcomers wore metal collars, and all of them looked at Gordon and Sonya briefly, then quickly glanced away. Sonya, Gordon saw, turning his head, had awakened, and was regarding her surroundings with eyes that seemed to have even more harebell-blue in them than before. "Are you all right?" he called again.

"Yes," she said, after a pause. "I am all right."

One of the nearer villages proved to be their captors' destination, and after passing between several neatly laid-out fields, the principal crop of which appeared to be a Venusian form of sweetcorn, the procession started down a narrow thoroughfare in the direction of a large circular stone building

surmounted by a steeple-like chimney from which smoke arose in a tenuous blue-white column. The buildings on either side of the street were plain to the point of bleakness, the façades featureless save for oval windows and narrow doorways. Villagers were everywhere, and all of them, men and women alike, sported metal collars. Children, however, were noticeably absent, though once Gordon caught sight of a round, wide-eyed face in one of the oval windows. He had to look fast to see it, though, because an instant later a woman appeared and yanked the child back out of sight.

He was more bewildered than ever. Obviously, judging from their reactions, the Venusians considered him and Sonya to be guilty of some manner of immoral crime; but the only crime they had committed that he could think of was trespassing—and certainly trespassing couldn't be construed as *immoral*. What in the world *had* they done then?

The procession had reached the large circular structure and was filing through its vaulted entrance. Terraced tiers of stone benches encircled a small, flagstone-paved arena in the center of which were two altar-like stone blocks, placed about five feet apart. Just behind the blocks stood a primitive forge,

and beside the forge stood an even more primitive anvil. A gold-skinned blacksmith was busily operating a pair of crude bellows.

Gordon and Sonya were placed on the blocks and strapped down by means of leather thongs. The tiers of benches filled rapidly, and an air of expectation rapidly permeated the smoky atmosphere. Gordon began to sweat—a reaction due partly, but not wholly, to the heat thrown off by the forge. Sonya's face was white. He tried to think of something reassuring to say to her, but for the life of him he couldn't. Quite by accident, his eyes met hers, and to his consternation her cheeks changed from white to pink, and she turned abruptly away.

THE audience began to chant, and presently a man of noble mien appeared, bearing two strips of copper-like metal. He handed them to the blacksmith and then stepped back and took up a position equidistant from each block, after which he proceeded to look sternly down first into Gordon's face and then into Sonya's. Gordon couldn't see what the blacksmith was doing in the meantime, but judging from the sounds the man was making, he was busily occupied. Bellows wheezed and coals crackled, and metal clanged on metal

as though a Venusian tarnhelm was in the works. Gordon knew perfectly well, however, that one wasn't and he wasn't particularly surprised when, a little while later, a water-soaked cloth was wrapped around his neck and was followed by one of the two metal strips. Steam rose from the wet cloth as the blacksmith held the two ends of the strip together until they fused, and even more steam arose when he tempered the resultant seam with a container of water. The job completed to his satisfaction, he removed the cloth and let the still-warm collar settle against Gordon's neck.

The other strip was similarly fused around Sonya's neck, after which the man of noble mein went into action. Raising his hand in a signal for the audience to cease its chanting, he launched a long sonorous speech, part of which he directed at Gordon and part of which he directed at Sonya. After a ringing peroration, during which he seemed to threaten each of them, he produced a pinch of white powder and sprinkled some of it over each of their heads. Finally he drew a long double-edge knife.

Well this is it, Gordon thought. But it wasn't. The man of noble mein merely used the knife to cut their bonds; then, after untying the thongs

that secured them to the stone blocks, he raised both arms in a gesture for them to stand up. Gordon massaged his legs before putting his weight on them, and Sonya followed the same precaution. He could hardly believe that they were still alive, but seemingly they were. And healthy too—if the pinkness of Sonya's cheeks was an accurate criterion.

The man of noble mein nodded his noble head in the direction of the entrance, and they accompanied him outside. Gordon did a doubletake when they stepped into the street. It was strewn with freshly picked flowers of every hue and description and lined by little children waving green twigs that resembled olive branches. He came to a staring stop. "Won't someone please tell me what's coming off?" he said.

Sonya stopped beside him. "Don't you really know?" she asked, her eyes fixed on a flower at her feet that was almost as red as her face had become.

"I know we're the focal point of some kind of ceremony—but what kind of a ceremony is it?"

Slowly Sonya raised her eyes. "It's a wedding ceremony," she said. "They—they married us."

THE flower-carpet stretched all the way to the outskirts of the village, and so did the two

lines of little children. Gordon stumbled along at Sonya's side, hopeful that he would wake up any second in the bachelor's barracks at New Canaveral. But the street stubbornly refused to dissipate, and so did the little children and the man of noble mein. As for Sonya, much less than dissipating, she took on added detail, and the metal collar around her neck seemed to throw off flame after lambent flame, and each one was brighter than its predecessor.

The man of noble mein escorted them outside the village, then turned his back on them as though they no longer existed and returned the way he had come. After his passage, the little children broke ranks and began playing in the flowers. Gordon faced Sonya. "Now maybe you'll tell me *why* they married us," he said.

"I will tell you on the way back to our ships."

She did not speak again till they reached the top of the ridge. Then, after she got her breath back, she said. "They married us because, underneath their demigod exteriors, they are nothing more than bronze-age puritans. Yesterday, when the man and woman saw us standing together by the brook, they were bewildered because neither of us was wearing what to them is a universal symbol of mar-

riage—a metal collar—and when you touched me they were shocked. You see, in their society, no man and woman can be alone together unless they are married, and it is unthinkable for a man to touch a woman unless she is his wife, or some immediate member of his family."

"We could have been brother and sister," Gordon pointed out.

"Do I look like your sister?"

He had to admit that she didn't.

"Anyway," Sonya went on, "their trailing us to different houses must have convinced them and the rest of their party that we are not. In the eyes of the Venusians, you see, our spaceships are just that. Houses. Odd one, perhaps, by their architectural standards, but houses just the same. How else could a simple bronze-age culture interpret them?"

GORDON ducked beneath a blossom-laden bough. "How did you know they're puritans?"

"I didn't—at first. I merely assumed, from their reactions to us, that they must be. And then I got to thinking about how neither the sun nor the moon can be seen through the cloud-cover, and it occurred to me that their concept of one god must have come much earlier in their civilization than would



have been the case on earth, owing to the fact that there could have been no intermediate phase of sun- or moon-worship. Perhaps, somewhere along the line, they had a Christ whose teachings they misinterpreted, and no doubt they have a version of genesis similar to the Judæo-Christian one—except that in theirs, the problem of creating the sun and the moon and the stars never arose. Anyway, now that they have married us, they are no longer interested in us. All that concerned them was our moral welfare . . . It seems to be growing dark.”

“It can’t be,” Gordon said. “It’s only a little past noon. Which reminds me—I skipped breakfast, and supper too.” He pulled two concentrated food biscuits out of his fatigue-all pockets. “I suggest that we stop for lunch.”

They sat down side by side beneath a tree with blue blossoms shaped like Dutchman’s-breeches hanging from its boughs. They were halfway down the opposite slope of the ridge now, but Sonya’s ship was still many hours away, and his was an hour farther yet. They ate silently for a while. Then, “There is one thing that puzzles me,” Sonya said.

“Yes?”

“Why did they marry us so soon? Why was there such a need for haste?”

“You made it clear enough. They misinterpreted our behavior and were shocked out of their self-righteous puritanical skins.”

She shook her head. “Shocked, yes—but not enough to have rushed us through a ceremony that under ordinary circumstances would have required days of preparation. There must have been another reason.” Suddenly she glanced up through the foliage at the sky. “It is growing dark.”

There was no longer any denying the fact. The roseate radiance of the youthful afternoon had transmuted to a sort of gray murk; moreover, the air had grown appreciably colder. Gordon stood up. “I think we’d better be on our way,” he said. “It’s going to rain.”

A GOOD three hours passed, however, before he felt the first drop. He and Sonya were in the hills now, and the ridge was far behind them. The rain was gentle, but it was persistent too, and both of them were soaked before another hour had gone by. “We will go to my ship,” Sonya said, brushing back a rain-wet strand of horse-chestnut colored hair from her forehead. “It is much closer than yours.”

Somehow her offering him shelter in a Soviet ship did not strike him as being in the least

incongruous. And when, a moment later, he slipped his arm around her waist, that didn't seem incongruous either. And when she permitted it to remain there, even *that* didn't seem incongruous. For some crazy mixed-up reason life seemed singularly devoid of incongruities all of a sudden. And amazingly forthright and simple.

The rain was extremely penetrating—so penetrating, in fact, that it penetrated his skin as well as his clothing. And it had a curious lulling effect. No, that wasn't the word. A curious soporific effect. No, that wasn't the word, either. Well what word was it, then?

He couldn't call it to mind till after they reached Sonya's ship and were standing at the base of the Jacob's ladder. By then it was too late. By then he was gazing softly down into her eyes and she was gazing softly up into his, and the world was well on its way toward being well lost.

He tried to force himself to step back and regard the situation with the cold and objective eye of a scientist, to evaluate this strange and wondrous quality that fell in the form of rain and to tie it in with the Venusians' motivation in marrying him and Sonya posthaste. In vain. All he could think of was the tune she had been humming

by the brook and the hole he had seen in one of her cheap cotton stockings. And then she was in his arms and he was kissing her rain-wet lips, and Washington and Moscow were forgotten place-names on a map that had no more meaning than the paper it was printed on.

The rain continued to fall. Softly; gently. Insistently. It sang soft songs in the leaves. It murmured; it whispered. It laughed.

It did not cease till morning. After starting back to his ship, Gordon mentally rehearsed the report which he and Sonya had agreed to send to their respective headquarters. It described briefly how they had been captured and released, but discreetly made no reference either to the wedding ceremony or to the rain. They had unanimously agreed that the situation was complicated enough without complicating it further.

He had gone less than half a mile when his collar began to press against his throat. Thereafter the pressure increased with every step he took, till finally he came to a semi-strangled stop. It was as though he had reached the end of an invisible leash.

The pressure lessened after he backed up a few paces, went away altogether after he backed up a dozen more. There was only



one explanation. The metal from which his and Sonya's collars—as well as those of the Venusians—had been forged, possessed magnetic properties unknown to terrestrial metals, and the attraction between objects fashioned from it grew progressively stronger as the square of the distance between them *increased*. Either the Venusians had disciplined this attraction so that it was limited to objects fashioned from the same stock, or the ore from which the metal was processed was naturally subdivided into small magnetically independent veins. Gordon did not know which was the case, but there was one thing he did know; when the Venusians married you, they meant business.

He began retracing his steps back to Sonya's ship. Halfway there, he saw her running toward him. Her white face told him that her collar had been giving her a hard time too, and that she had arrived at a conclusion similar to his own. "Gordon, what are we going to do?" she gasped when she came up to him.

"We'll get them off someway," he reassured her. "Come on—I've got the necessary tools in my ship."

He tried all morning before he gave up. The collars were impervious to his best shears, and

his hardest file failed to scratch their surface. Using his acetylene torch was out of the question.

HE sat disconsolately down on the ground several feet from one of the landing jacks. Sonya sat down beside him. "We won't be able to go back at all now," she said. "Neither your ship nor mine can carry us both, and there's no way we can occupy more than one of them at a time."

Gordon sighed. "I suppose we could radio for help," he said presently. "But if we did we'd have to tell them everything that happened. I'm afraid they'd be sort of skeptical about the rain. Of course, we could leave that part out—but I'm afraid they'd be skeptical about the collars too. In fact, I don't think they'd even believe us. They'd simply jump to the conclusion that we've fal—that we don't want to return and would order us back on the double the minute maximum juxtaposition occurred. No, if we radio for help, we've got to have a good concrete reason for doing so—one that they'll be able to understand and believe."

Sonya managed a wan smile. "I—I can just see myself standing before the Council of Ministers, blaming what happened on the rain," she said.

Gordon laughed, "And I can

just see myself standing before a congressional investigating committee, explaining about the collars." He began to feel better. A situation that could lend itself to humor could not be wholly hopeless. "Here's what we'll do for now," he went on. "We'll radio back the report we agreed upon, and then we'll go on with our work as though nothing is wrong. Sometimes problems solve themselves; but just in case this one shouldn't, and we can't go back, we'll build a cabin so we'll have some place to live."

Sonya's eyes sparked like a little girl's. "Let's build it by that little brook," she said. "Where—where we first met."

"Fine," Gordon said.

\* \* \*

During the ensuing weeks, they spent their mornings gathering data and their afternoons working on the cabin. They took time out to analyze a sample of rain water, but it evinced no unusual qualities. Gordon was not surprised. Shortly after landing, he had tested a sample of Venusian water for drinking purposes, and with the same result. Clearly, the quality that had undermined their inhibitions originated in the cloud-cover, and evaporated soon after it reached the ground.

After the cabin was finished, they began going on afternoon-hikes into the hills, tramping

through idyllic woods, talking and laughing, exclaiming now and then at unexpected patterns of flowers, starting at sudden rainbow-flights of birds. They saw but few Venusians, and the few they did see ignored them. One afternoon they found a fern-bordered pool beneath a white-skirted waterfall, and after that they came there everyday to swim. Sonya's skin darkened to a deep gold, and looking at her, Gordon sometimes found it hard to breathe. Every so often the sky darkened, and rain fell; but the rain was superfluous now. And as for the invisible magnetic chain that bound them together, that had been supplanted by another invisible chain that was ten times as strong.

And yet the original one still remained, and the problem it represented grew more and more acute as their scheduled departure-times approached. They desperately needed a good practical reason to give their respective governments for not returning to Earth—and quite providentially at the very last moment (though it seemed anything but providential at the time) they discovered that they had one. Or rather, Sonya did. On the morning of the day she was scheduled to undergo the rigors of acceleration, she regarded Gordon shyly across the little breakfast table he had built.

"I—I am going to have a baby," she said.

THE news, when it arrived in Moscow, had something of the impact of a hydrogen bomb, and when it leaked through a hitherto unsuspected crevice in the Kremlin, there was a sort of chain-reaction throughout the entire Soviet Union. It was at this point in his political career that the Soviet premier discovered a universal truth: people the world over, whether they be communistic or capitalistic, have a very large soft spot in their hearts when it comes to babies.

That spring, Venus outshone herself, and hung in the evening sky over Moscow somewhat in the manner of the star over Bethlehem. The premier had a haunted look on his face when he appeared before the Council of Ministers. He was not alone. The Ministers had haunted looks on their faces too. What did you do when you had to cope with a forthcoming space baby who would be half capitalist and half communist and who was already adored by the whole world? The premier did not know. But there was one thing he did know: in the last analysis, any party is the people, and while you can con the people into believing that black bread is white bread and that caraway seeds are cav-

iar, you cannot con them into believing that a child conceived on the Planet of Love by a Russian girl and an American boy is any thing other than a harbinger of peace.

So in the long run, what the premier did was the only thing he could have done. He arranged a summit meeting with the president of the United States and the prime minister of Great Britain, and for the first time in history, the East and the West really got together. The threat of war could not, of course, be totally eliminated at such short notice; but a number of aggravations that could precipitate a war could be eliminated—and were. This accomplished, the three leaders drew up plans for a super three-man spaceship to be built posthaste by the best engineers the three nations could supply, and unanimously agreed that the pilot would be English, the obstetrician, Russian, and the nurse, American.

It has been said that after the meeting the Soviet premier and the president of the United States got together and began thinking up names. This is extremely doubtful. Anyway, if they did, they were wasting their time, for Sonya Mikhailovna and Gordon Andrews had already taken care of the matter. The name they chose is well-known today—except, perhaps, by those

for whom this history has been recorded. Which brings us back to the aforementioned news bulletin. In common with most news bulletins, it has about as much poetry in it as an old shoe, but its message shines forth with a radiance that excels even the radiance cast by the star over Moscow.

*Geneva, Switzerland, Sep-*

*tember 11, 1996—The young Russo-American ambassador-at-large, Pëtr Gordonovitch Andrews, announced this morning that his peace plan has been accepted by all major and minor powers, and that the war that has threatened mankind for the past half century can no longer occur.*

THE END

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### Through Time and Space With Benedict Breadfruit: VIII

THE peculiar religio-sexual practices of the inhabitants of Hoogaht VIII are known throughout the Galaxy. One day a group of Hoogahtu called upon Benedict Breadfruit.

"We are," said their spokesman, "planning to build an old-fashioned Earth-type house for our group. The living quarters for the males and females will be on the first and second floors. The Temple of Love, as we call it, will occupy the top floor, just under the roof. Knowing your abilities with language, we would like for you to give us a name for our Temple."

"Orgiastic top floor, eh?" asked Breadfruit.

"That's right."

"A hot-pants attic, as it were?" said Breadfruit.

"If you insist, yes," said the spokesman.

"A libidinous area just under the roof, one might say."

"That's what we said," agreed the Hoogahtu.

"In other words, a lewd loft?" persisted Breadfruit.

"Most emphatically," said the Hoogahtu spokesman.

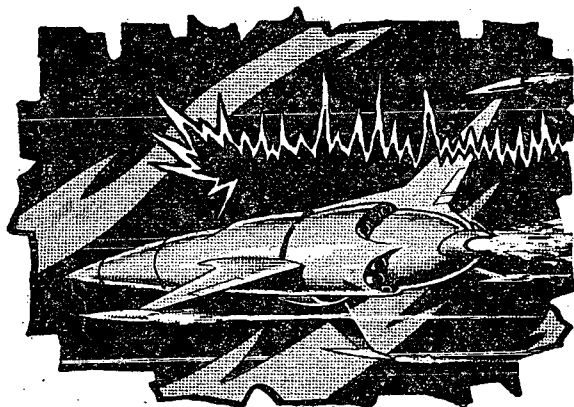
Benedict Breadfruit shook his head, baffled for the first time in his life. "Gee, fellas, I just can't think of a damn thing."

—GRANDELL BARRETTON

*Editor's Note: In this final episode of Benedict Breadfruit the author's name is revealed.*



# PATTERN



*Sometimes the only way to fight fire is with fire.*

*One can hardly stop to consider what the  
second fire may destroy. Can one?*

RAHLL floated; a dim pattern of electrical impulse in the void of space. He was vaguely aware that he was dying into nothingness, and that in a short time he would be a meaningless mass of aimless patterning, with no consciousness and no unity. But there was nothing that could be done about it; his flexible impulse had woven itself into millions upon millions of varying thought-forms, and no solution to

his situation had presented itself.

His impulse writhed into remembrance of the Great Pattern of countless centuries before. There had been thousands of impulses similar to himself, all banded together into one huge, unified Form, standing in this wasteland of space; thousands of impulses, all twisting in the shaping and reshaping of their own thoughts and emotions, but all connected by the central Great

By **ROBERT H. ROHRER, JR.**

Illustrated by **ADKINS**



Pattern so that they stood, impulse to impulse, in a huge, delicately crystal-like structure of electricity.

And they had given each other life, replenishing their powers within themselves, and existing in the contentment of peace, for millennium upon millennium.

Until the Cataclysm. There had been some impulses who tired of the old pattern of unification, and wished to form a new one; however, they were opposed by other, more content impulses, who stubbornly held to the old pattern. The rebels, as they were called, formed their carefully planned new pattern in spite of the opposition; the result being that the two different patterns intertwined each other, fell into antagonizing frequencies, and blew the community apart.

ONLY Rahl's delicate impulse had escaped this Cataclysm. He had been badly wounded, unable to move in any direction; so for thousands of years after the explosion he had floated in darkness, waiting for a sign of another impulse with which to make contact and create mutual sustenance. But no sign had come, and Rahl's shape had slowly become warped with weakness and hunger into the jagged form of a pattern which had never been seen in the old community.

The pattern of a cannibal.

The only central thought-form which activated him now was to Find Impulse and to Absorb Impulse; to absorb flexible impulse into his wavering frame and twist it to his own form, so he would live, so he could exist for a while longer, so he could branch out and find more flexible impulse to eat and twist to his pattern.

But the long process of disintegration was now almost at an end; he could reshape his thought-patterns only with the greatest pain and difficulty, and branching out was out of the question. He realized this, and slowly prepared himself for the final pattern to come; the pattern of death.

As his faint, blue shape of line-impulse reformed within itself, however, he became conscious of a weak, almost nonexistent impulse beating against the outer fringe of his pattern. He stopped his reforming process and, summoning all the power he could, glided toward the impulse.

When he did this, the impulse became definitely stronger; slowly his delicate, crystalloid form became more and more conscious of it; its power rose and rose, until it reached an almost unbearable intensity.

Waves of hunger beat against Rahl, as they had for centuries; but here, here at last, was satisfaction. His jagged cannibal's

pattern roused itself, waiting for the new impulse to come within striking distance. And then . . .

It stopped. It had been there for only a moment, and now it was gone. Rahll desperately sent out tendrils of a length he had thought he would never attain again in search of the huge impulse, and found . . .

Another. This one was smaller, although still one hundred times as powerful as Rahll's; and, oddly, it was channelled into five separate spokes of impulse which functioned around a large central hub-impulse. The impulses in the five channels were exactly alike, but they were interpreted differently by the central hub due to the different channels through which they came. Rahll sorted and distinguished these five interpretations, his pattern-weaving into one of curiosity and vague dismay as he did.

One channel of impulse was evidently devoted to the sensing of forms and colors, something which Rahll found unnecessary; a second was one which sensed vibrations in — in something, a substance Rahll was unfamiliar with, one with more substance than the void he lived in and yet unsolid enough to carry vibrations easily; a third existed to sense odors in this unsolid substance; a fourth to sense some things which Rahll did not recognize, bitter, salt, sweet, and

sour; and a fifth to sense heat and cold. All these impulses transmitted their sensings to the central hub, which seemed to be a completely flexible mass of unpatterned, vari-frequencied electrical impulses that was almost overpoweringly strong.

Yes, these were food for Rahll; but two factors held him from consuming all six branches of impulse together.

THE first was that he was so weak that any more than one of the spoke-impulses absorbed at a time would have shattered his frail form.

The second was that this collective impulse operated on a frequency altogether different from Rahll's. Try as he might, Rahll could not emulate this frequency; it was too alien, too far removed from his own, and he was too weak. But this impulse's frequency was flexible; if he could make it become harmonious with his own frequency, then he could easily absorb it, branch by branch.

It would be a relatively simple matter to make the impulse harmonize with him, Rahll knew; all he had to do was make the flexible-frequencied impulse accept his own impulse as something unalien and natural, by taking a form the impulse would not suspect; something which blended with the impulse's environment.

As soon as a branch of the alien impulse accepted Rahl's own impulse as natural, Rahl would move blocks into the channels of that branch and absorb it.

First he examined the branch devoted to sensing odors. Yes, it would be child's play to cause an impulse to transmit through the odor channels to the central hub, where it would be interpreted as an odor . . .

**B**RENNER sat hunched over the controls of the spaceship. Damm! How had he gotten so far away from Base? There weren't any planets here for millions of miles in all directions; only blackness. He couldn't make connection with Base; he couldn't make connection with anything.

His small, three-compartmented ship sped swiftly along toward nothing. In the tail compartment, the atomic and the electrical generators hummed serenely; in the nose compartment, Brenner continued to curse.

Something in the mechanism of his directional equipment was fouled up. That must be it. He decided to cut power and think for a while.

He closed off the atomic generator, stopping the rockets, and, as an afterthought, shut off the electrical generator also. Sitting in the darkness, he tried vainly to make out some light in the void beyond the nose observation

window. But he could see nothing. No stars, no planets. Nothing at all. Base had been built in deep space; all light from other suns was cut off here by time and distance.

He leaned back in the chair and closed his eyes. Hale at Base was probably tearing his hair out. Brenner could hear the old man now: "That blasted Brenner! Here we are, a space station a million miles from anywhere, and he has to lose our best craft for us! I knew that blinkety-blank halfwit would pull some lame-brained stunt like this. I knew it, I knew it, I . . ."

Brenner cut Hale off and began to think about Earth. And home. And Barbara. And the nameless little thing who must have come months ago, and whom he would have seen within a year if he hadn't been so Godawful stupid as to lose himself out here.

Well, at least he had the radio. And a good supply of food. And the knowledge that Hale would be keeping all channels clear for a call from him.

He frowned. He should have been able to make radio contact with Base long before this. Perhaps his trouble was in the radio . . .

Suddenly a strange odor touched his senses. Brenner frowned, sniffing. He'd never smelled anything like that before. It was rather metallic—almost

like a short circuit. But not quite.

And then, gradually, the odor became that of coffee. Hot Coffee, percolating somewhere in the ship. He had put some coffee on, hadn't he? He frowned, and then went back to his former thoughts of self-disparagement, accepting the odor as normal, as part of his natural environment, "forgetting" about it.

The first block moved in.

Brenner hardly noticed that he had lost his sense of smell.

**RAHLL** exulted. This was the first impulse he had ever tasted—his jagged cannibal's pattern contracted itself in ecstasy as he twisted the absorbed impulse into his own thought-form. He was still hungry, yes—and that hunger was hardly on the way to being satisfied—but at least this was a beginning. It fired him on—he must have more impulse, more, until he could branch out and find even more

The hunger rushed over him in waves, deep, welling up from the pit of his thought-pattern, almost overcoming his form with its intensity. Yes, he would have more. Taking the first impulse had been simple; as soon as this other being had accepted the bogus odor as being normal, his frequency had become harmonious with Rahll's, and Rahll had moved

a block into the channels through which the impulse flowed and absorbed the impulse. Now the block remained in those odor-channels, preventing other impulse from travelling in them.

Rahll turned his attention to the satisfaction of his hunger.

Brenner sniffed. That's funny—hadn't he smelled coffee a minute ago?

Wait a minute—he couldn't have smelled coffee. There wasn't any coffee on. But there must have been, because he'd smelled it.

He sniffed again. He couldn't smell anything now. Odd. He leaned back in his chair and listened as the atomic and electric generators hummed in the background . . .

The second block moved in.

The sound of the generators disappeared.

Brenner started. But he couldn't have heard the generators—they were off! He rose. All was silent in the ship. He banged on the control panel with his fist.

He heard no sound.

Panic set in.

**RAHLL's** cannibal-pattern contracted and protracted in the black void. The faint blue lines of his form glowed a bit more strongly now than they had before, although the great hunger still shook his frame.

His thought-forms wove in and out in visions of power, a power he had never thought of possessing back in the time of the Great Pattern, a power with which he could absorb everything, every—

And then Rahll's thought-form twisted into a totally unfamiliar shape. And he thought of Hale.

He could picture Hale only vaguely; a big man—man; that was a new term—a big man, whatever a man was, with a deep voice—voice, another new term—and a great temper—temper

Rahll slowed his pattern in confusion. Man, voice, temper, Hale—all of these; he had never been aware of them before, nor of things like them. Why was he aware of them now?

AND then he realized why. This alien being's patterns, even though scattered and unmethodical, were influencing Rahll's patterns as Rahll came into close contact with them during the process of absorption. Just as Rahll's patterns must be influencing this alien being's.

Rahll formed and reformed thoughts for a moment, and then decided that this was a good thing. For now he would have new weapons with which to trick this other electrical impulse; new and better weapons. Hale, man, voice, temper.

At that moment, Brenner was

experiencing much the same phenomenon as Rahll was.

Brenner's panic died suddenly as he searched his thoughts and found, with a shock, that he knew why he could not hear. He could see the answer only dimly, but it was there; something completely alien to him, something outside the ship, a crystallike pattern of electricity—of electrical impulse—was—was doing something else alien to him which had caused him to lose his sense of sound.

He sat down and concentrated on this answer. There must be more to it, he thought, more to it than . . . Yes, there was more to it. He received jumbled thoughts concerning frequencies alien to each other, and then pulled out the one totally clear impression he had. Illusions were being used to dupe him. He wasn't quite sure of exactly how they were being used—something to do with alien frequencies cropped up again—but he did know that the alien being outside his ship was using illusion to slowly destroy him. But wasn't there a way out?

Yes, there was. If he didn't accept the illusion, whatever it was, as being normal, he could not be touched by this creature outside. If he did not accept the illusion as being normal . . .

Brenner turned on the electric generator. The room flooded with light.



Rahll tensed when he felt the other, larger impulse that he had first felt rise up again. The impulse was far too huge to absorb; and, furthermore, there was something about it that almost repelled Rahll. It was impulse, yes, but it was a different kind of impulse, of a type Rahll had not run across before. If he had been strong enough he could have consumed it, but he was not sure that he would have wanted to.

He steeled himself against the overpowering sense of the presence of that impulse, and carefully searched out the other, smaller one. When he found it, he began to think. Certainly this being's impulse had picked up the pattern which Rahll was following; therefore this being would be on his guard against Rahll's simulations of his environment. Rahll had to sneak under that guard, carefully, subtly, in as unnoticable a way as possible.

He felt that he could absorb two channels of impulse this time. He picked the two, and began to weave rhythmically in thought.

**B**RENNER sat back in his chair. He was ready for the thing, whatever it was. It would not creep under his defenses. Nothing it could do, no illusion it could form, would take him in. He would not allow it to. He could not allow it to; for patterns had

been invoked in his mind that suggested what the creature would do with the power derived from Brenner's impulse if it ever absorbed it all; patterns which pictured the absorption of all life on other worlds, and a single great pattern of electrical current crisscrossing in spiderweb fashion throughout the universe; a strong, unbreakable chain of intelligence, sated with the impulse of every fish, bird, insect, and man in existence. Brenner suppressed a shudder. What he was up against might be too much for him to handle . . .

No. He had to handle it. For Barbara's sake. For Hale's sake. For the sake of all those men back at Base, who would be the creature's next prey if it destroyed Brenner.

Suddenly there was a clanking noise. Brenner stiffened, for he did not hear the sound with his useless ears; it formed within his mind. The gruff, temper-tinged voice he heard came from within his mind, too; "Brenner, you damned fool. I knew you'd get yourself into a fix like this. Our best craft, too." Brenner whirled around.

The tall, heavy-set figure of Hale stood by the airlock, smiling.

Brenner frowned. The alien must be a complete fool; Brenner would never accept a bogus Captain Hale where Captain Hale could not be.

Hale's figure strode forward, saying, with that fixed smile on its face, "I always thought you'd wind up like this: lost in deep space, with nothing around you. Have you looked at that radio? Sure it's not what's on the blink? Oh, that's right, you wouldn't be able to hear it even if it was in good shape," the words flowed through Brenner's head, "wouldn't be able to. Have a cigar, while you stand there thinking. You're going to have to think hard to get out of this one, Brenner. Mighty blasted hard." And a deep chuckle shook Brenner's skull as the figure of Hale opened its mouth to laugh—and opened it, grotesquely, a trifle too far for a genuine human mouth to go.

**B**RENNER puffed at the proffered cigar. Something was wrong here—the alien could not be this obvious in his working. Brenner's mind steadily refused to accept the thing that stood before him.

The figure cocked an eye at him. "If you don't get back to the station," it said, "you'll never see Barbara again. Or the kid. You know that, don't you? And you want to see Barbara don't you? Don't you?"

Brenner did not answer.

The figure smiled. "Well, you can see her, if you want to. Right now." And the figure's body and face grew smaller, softened in

their lines, and the clothing it wore changed from a severe blue uniform to a light blue dress. "Hello, Will," said Barbara's figure:

Brenner still kept silent, staring at the woman's form before him. It was so *like* her—and in its arms it held a small bundle, which gurgled softly. Brenner's eyes fell to this bundle.

Barbara's figure saw the direction of his glance. "You haven't seen the baby yet, have you, Will?" she said, moving toward him. "Look." She held the small bundle out toward him.

But as she did, one of her hands dug into the blankets wrapped around the tiny form, wrenched the form from those blankets, and threw it to the floor. Barbara's face, now covered with a too-wide grin, looked up at Brenner as her feet stamped the small figure to a red pulp. "Look, Will," she said, and laughed, stretching her mouth wider, wider, until her face was distorted completely out of shape, and her black hair streamed wildly in the air.

Brenner stood paralyzed. The laughter was filling his mind, overcrowding everything else, becoming louder, and louder, and

...

It stopped. The red pulp on the floor disappeared, as did the other gnarled figure. All was silent, as it had been before.

Gone. The creature was gone,

and it had not hurt him at all. Brenner, still rooted in shock, took a few more thoughtless puffs on the cigar the alien had handed him.

The third and fourth blocks moved into place.

The cigar disappeared.

Brenner could no longer feel or taste.

RAHLL rolled in the darkness, his blue line-form glowing more strongly than before. His cannibal pattern flowed into the thought of all the impulse in the universe around him; of the time when he would be able to branch out, find the stars which were concealed here by distance and time, and absorb the many life-impulses living around those stars, satisfying completely the burning hunger within him.

His third plan had worked admirably. He had shocked the other being with obtrusive actions into a state in which he did not notice inobtrusive actions. That would work again.

He was still bothered by the other, huge impulse which throbbed against his pattern; it seemed strangely adamant and . . . But he couldn't find the exact word for what repelled him.

He pushed the pattern aside. Enough time to worry about that after he had absorbed the fifth branch of impulse of the alien being nearby.

Again, Rahll's thoughts turned to a method of operation. What illusion to form now . . . ?

Brenner sat in the nose section of the ship, his head throbbing. The alien's visions of power were now perfectly clear in his mind, but for some reason they did not bother him any more. He had been tricked by that thing outside; he had to fight back somehow. That and that alone mattered now.

And a way to fight back was slowly creeping into his thoughts; some formless fear the being had of the impulses formed by the electric generator. Perhaps if he could trick the alien into . . .

Whang! A loud noise cut through his mind.

He jumped up and turned toward the back of the compartment; just in time to see a shadow flick through and close the door there.

He ran to the back, turned the wheel in the center of the door, pulled the door open, and staggered into the second compartment. Whang! Something hit him across the back of his neck. He jerked and crashed to the floor, fighting to maintain consciousness.

With a desperate lunge, he grabbed at the wall and pulled himself to his feet. Then he looked to the back of the second compartment, just in time to see

the shadow flick through the door.

He dashed through the doorway into the third compartment. For a second Barbara's face grinned impishly at him from the door at the end of the room, and then disappeared. Brenner plunged to the doorway through which she had gone and jumped into the fourth compartment.

For a moment he stood looking around the completely empty room.

Then the fifth block moved into place.

Brenner could not see.

It was then that he remembered that his ship had only three compartments.

SOMEHOW he made his way back to the nose compartment. He was completely cut off from the rest of his body by Rahll's five blocks; only his seat of thought remained. And if that were taken away . . .

He seemed to be able to *sense* objects about him, although he could neither see nor feel them; but he did not stop to try to understand this. Instead, he sat down and began to concentrate. To concentrate on further scraps of information that had been left with him by this last close contact with Rahll; information which pointed toward a possible way of stopping the thing outside.

He had received before the impression of Rahll's half-fear of the electrical impulses formed by the generator of the ship; now he was fairly certain of the reasons for Rahll's reluctance to absorb these impulses.

In the first place, they were too strong for Rahll's thus far underdeveloped body.

In the second, they were inflexible. True, if Brenner turned a dial he could change their amperage, but they were formed on a basis of friction, not of chemical reaction, as Brenner's and Rahll's impulses were. The generator's impulses were not stimulated by certain stimuli at certain times, but flew from the generator in a continuous, hard, stable stream, inflexible, unable to be woven about into thought patterns, unable to be twisted by Rahll.

And this told Brenner how to stop the alien.

Sensing his way, he reached a medicine cabinet, and sensed out a bottle of morphine; carefully he measured out the right amount, and set it on a table beside the equipment that controlled the electrical generator.

Then Brenner began to slow the generator down. The lights dimmed, becoming lower and lower. . . .

He knew that Rahll was waiting outside, waiting to consume the last weak impulse in Bren-

ner's body; he also knew that Rahll would probably automatically consume any electrical impulse of a frequency harmonious with the creature's that was of the same level as Brenner's without noticing that it came from a generator instead of Brenner, because of the hunger that threatened to overpower Rahll and render him insensible in the lust for food.

Brenner continued to lower the speed of the generator. He also knew that Rahll would not be deceived if there were two separate impulses on the same level to distinguish between. In that case, Rahll would undoubtedly pick out Brenner's because of Brenner's alien frequency. So Brenner had to lower his own impulse. He had to lower it to its most basic function; that of causing the heart to beat.

He took a glass of water and swallowed the morphine.

As the haze began to blot out his thoughts, he continued to turn the generator down, down

...

**R**AHLL sensed the drop in the larger electrical impulse; he followed it as it dropped, until it was on the same level as the other impulse was. Wait! What other impulse?

Rahll's thought-patterns stopped in confusion. This current was the *only* impulse on the

same level as the alien one. Rahll pondered for a moment; if this was the only impulse on the right level, then he must have confused the two impulses for a moment, and this was actually the right one. Yes, that had to be it.

He examined the impulse, sensing around it—and his crystal-shaped form jumped in surprise. The alien frequency which he had had to trick by illusions into becoming harmonious with his own was gone from this impulse. He would be able to absorb this impulse at his will. True, there was something familiarly repulsive about it, but he was hungry; and

...

After only a short hesitation, Rahll's electric jaws opened, widened to full size, and closed greedily on the impulse.

Too late he realized his mistake. His puny blocks were unable to hold up against the continuous, non-chemically produced stream of electricity from the generator. More and more impulse flowed into his body, more and more *inflexible* impulse, which he could not twist into his cannibal's thought-pattern, torrents of perfectly stable electricity, slowly influencing his own pattern as he had expected to influence the impulse, influencing his into a frozen, stable, inflexible pattern of continuous hunger-satisfaction.

His crystalloid jaws spread wide, Rahll floated in the black

void of space, motionless, unable to move, unable to twist into new thought-patterns, and therefore unable to think. The inflexible current of electricity poured steadily into his body . . .

\* \* \*

Slowly the effects of the morphine wore off, and the haze lifted from Brenner's mind. As his power to think returned, he began to realize that his plan had worked, and that the alien had been overcome; and he was glad of this only because it removed him, Brenner, from danger. He no longer cared that the creature might have absorbed the impulses of every living being in existence; the thing was frozen, and he was safe from it—that was all that mattered to him.

Of course he could not see, or feel, or hear the motionless crystalloid pattern outside. But he knew it was there. He could *sense* it.

He could *sense* it because his heretofore unmethodical hub-impulse pattern, in its close associa-

tion with Rahl's, had been slowly twisted and molded into a form very much like the alien's, giving him Rahl's powers of sightless observation of other impulses and objects. Brenner no longer had any need for his lost powers of sight, hearing, taste, smell and touch.

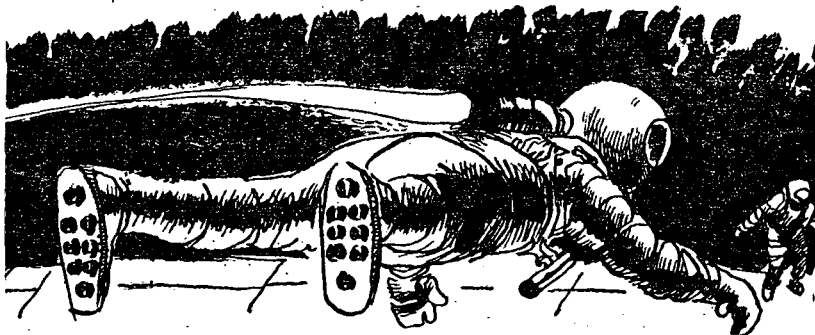
He groped his way back to the nose seat, sensing his way as he could not feel it. He would find Base—he would be able to sense the way back to it as soon as it was close enough. He would go back to Base, because, naturally, his *basic* thought-form had also been molded into the shape of Rahl's; and Brenner was hungry, and he knew he could find food at Base.

Food. He pictured Hale, and the other men at the station.

Food. His jagged cannibal's pattern contracted in ecstasy at the thought of it.

He activated the atomic generator and whirled the ship around.

THE END





# THE SPECTROSCOPE

By S. E. COTTS

**Great Science Fiction by Scientists.** Edited by Groff Conklin. 313 pp. Collier Books. Paper: 95¢.

This is one of those rare books that would be worth reading even if all the stories were dreadful (and indeed, some of them are) because the content affords us a peephole, as it were, into the leisure-time imaginings of a most distinguished group of scientists. Naturally, those two familiar and versatile men, Arthur Clarke and Isaac Asimov, are included. But we can also read works of fiction by such others as J. B. S. Haldane, Willy Ley, Julian Huxley, Norbert Wiener and Leo Szilard, to name a few. There are sixteen stories in all, and though I'm not sure the world has lost any literary geniuses because most of the men devote themselves to science, the sensation I got on being let loose among them was somewhat the same as if I were allowed to eavesdrop on the Old Vic Com-

pany while they were entertaining themselves at charades. Pet ideas, experiments that never proved out to expectation in the lab, notions which were left dormant through lack of time or funds—all are aired with various degrees of success.

Don't miss this rather unique opportunity.

**The Long Tomorrow.** By Leigh Brackett. 223 pp. Ace Book. Paper: 40¢.

This is a book that I've been holding onto for a few months in the hope that I might find a little space to give it all the praise it deserves. It is not a brand new book, but this is my first acquaintance with it, and the effect is dazzling.

Though Leigh Brackett is well known among sf fans for her space yarns, *The Long Tomorrow* has nothing in common with any of them. Set right here on Earth, the novel has not a trace



of aliens, robots, space ships, or any other such paraphernalia. Though set in the future, it is not a future distorted past all imagining. It is still rooted in a reality that is so true-seeming and so immediately recognizable that one doesn't get the sensation of "story-being-told," but rather of "events-being-chronicled" by a most objective scribe.

The tone of the story is established at the very beginning by a quote from the Thirtieth Amendment of the U.S. constitution stating that "no city, no town, no community of more than one thousand people or two hundred buildings to the square mile shall be built or permitted to exist anywhere in the United States of America." I suspect that most authors who reached that point would have gone back to show us how this state of affairs came about, but Miss Brackett chooses the less obvious course and takes up her story after this amendment has already been the law of the land for quite a while.

This is the story of Len Colter and his cousin, Esau, two boys whose adventures, in a happier and simpler age, might have been of no more import than the antics of Huck Finn and Tom Sawyer. The boys and their families, and millions of others, were New Mennonites living in a rural village two generations after the Destruction. Since the outlawing

of cities, the Mennonites had become a dominant group, and the banning of Science which had caused the Destruction brought little inconvenience to a sect which had never taken to the new ways. But though Science was banned, the Colter boys heard, quite by accident, of a place called Bartorstown where scientists still worked in secret. The story, then, chronicles their efforts to learn more about this place, their growing obsession with the idea, and their long and strange quest to find it.

*The Long Tomorrow* is not just a well-written, plausible novel of a future that might be. It is full of pungent philosophy and solid, multi-dimensional characters. It is also as exciting and suspenseful as any adventure story, no matter how exotic the setting.

**Return to Otherness.** By Henry Kuttner. 240 pp. Ballantine Books. Paper; 50¢.

This is another "Otherness" volume by the late Henry Kuttner, the earlier one being entitled *Bypass to Otherness*. In presenting this second anthology to the public, I am not wholly convinced that the editors have done a service to his unique reputation.

There is a central thread running through these eight stories. In varying degrees they all center around creations or machines

which duplicate human activities even though they are not all made by human hands. And most of the stories revolve around man's conflict or cooperation with these "things."

Though there may be a certain similarity of theme in the various tales, there is a good deal of variety in the moods which permeate them. Some are frankly chillers, some are wholly humorous, some are a combination of both. For me, the mixture is unfortunate. The somber ones are no better or worse than those of a half dozen other good writers. They're solidly worked with no screaming flaws, but they're not outstanding. A story like "See You Later," starring the inimitable Hogben family, bubbles over with the light irreverent touch at which Kuttner excelled. That one, and the others which share its whimsical slant are the pick of the crop.

**Telepath.** By Arthur Sellings. 160 pp. Ballantine Books. Paper: 50¢.

*Telepath* represents Mr. Sellings' public debut and, as such, leaves a question in my mind as to his future. That he has a talent for writing I will not question. But whether, in science fiction, he has picked the best medium for his gifts is as yet unproved.

Arnold Ash, the hero, was Mr. Average personified. He was a

writer of no great merit, but then he was reconciled to this niche in life. He was neither bitter nor ambitious by nature. Then he had an experience with telepathy and was shaken out of his chronic inertia. The mind that Ash's had reached in this unlikely experience was that of a young painter. She was Ash's opposite in every way—gifted, filled with drive, willing to sacrifice in order to paint, single-minded in her artistic goals. So where telepathy gave Ash a meaning and purpose for the first time in his life, it represented for Claire Bergen, the girl, an unwelcome distraction, an invasion of her privacy and a threat to her hard-won independence. The plot is a very simple one, dealing with Ash's efforts to find out all about telepathy, Claire's attempts to forget all about it, their reactions and interactions, and the other people who gradually get pulled into the conflict.

It is in his descriptions of people and personal relationships that the author shines. But when dealing with the telepathy itself (not as just a problem to the people involved), he is not too interesting. And this is a great shame because his efforts will quite naturally be compared to those authors who have turned telepathy into an unforgettable reading experience. As much as science fiction needs all the good

authors it can grab, it just might be that Mr. Sellings would be better off as a writer of straight fiction. In the meantime, he has made me curious about what he might turn out next. If it should be good sf, then he will have proved himself twice as promising (and versatile).

**The Super Barbarians.** By John Brunner. 160 pp. Ace Books. Paper: 35¢.

There is nothing very new in John Brunner's latest. The various bits and pieces that make up the story have all had their run before, both in other people's works and in his own previous ones. Yet, this short novel does manage to be enjoyable entertainment, all of which proves that a writer such as Brunner, with a certain narrative flair, can even on occasion successfully dispense with originality. The sum here is greater than the parts. I'll accept this state of affairs for a time, but I hope he doesn't adopt it as a permanent characteristic. He is capable of better.

The hero of the novel is Gareth Shaw, an Earthman serving as a steward at an estate on Quallavarra. The natives of this planet, the Vorra, had conquered all space though, strangely enough,

their land is extremely underdeveloped and almost feudal in its laws and government. At first glimpse, Shaw appears to be nothing more than what he is—a servant to one of the strongest Vorrich families, the House of Pwill. He had got his job after serving as a tutor to the Pwill heir while Pwill Sr. was lieutenant governor of Earth. For seven months after Shaw's arrival on Quallavarra he never left the estate. Then one of the Pwill wives sent him on an errand to the city where it was rumored there existed a fabulous Acre, a few square blocks where Earthmen were supposed to live in perfect freedom surrounded by their enemies. What Shaw finds in the Acre, how he gets pulled into their struggle, the meanings of the tantalizing bits of half memory that start disturbing him—these are the elements of the story. As I said, there are lots of reminiscences of other stories here—the victory of Earth against overwhelming odds, the human “time bomb” programmed and planted for a deliberate purpose, etc. But a fast pace and narrative skill save the result from the humdrum run of the mill stories which, in many ways, it resembles.



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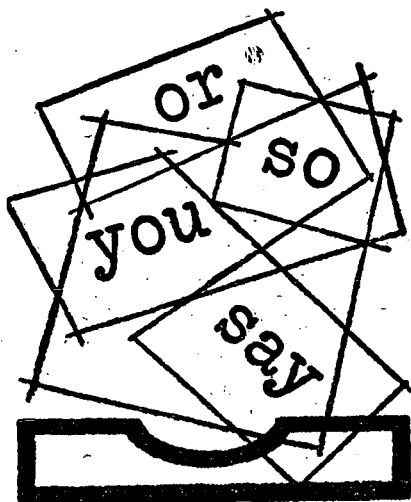
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me later.



Dear Editor:

Something has got to be done about S. E. Cotts. First, let us analyze his reviews and see what is wrong with them:

A few issues ago, for example, he soundly tore apart Sturgeon's p/b reprint, *Not Without Sorcery*, and said that, aside from "Brat," all the stories in it were poor. Well now, Mr. Cotts, it seems that your opinion differs from two other much-inferior-of-course critics, August Derleth and Groff Conklin, both of whom have included *It*, which was also in this book, in one of their anthologies. My main complaint, though, is the fact that he passed off the book so briefly; it sounded to me as if he read one story which he didn't like, and then read "Brat," and then wrote the

review. A much superior critic, P. Schuyler Miller, not only praised the book (as it should be) but analyzed each story, with a sentence or two, to give the reader a good idea of the author's ideas.

Then, in the latest (June) issue, Cotts criticizes *Daybreak*—2250 A.D. for two reasons: 1) no love interest; 2) they had retitled it from the hardcover, *Star Man's Son*. Well, I'm sure that we are not all so sentimental as to require a love interest in every story we read. *The 39 Steps* is an unusual book, in that it has no mention of a woman in it—but its popularity doesn't seem to suffer. John W. Campbell's "Who Goes There?" the best sf story I have ever read, also has no mention of women (it is only a short novel, though) and I would like to see Mr. Cotts try to improve on it by introducing one. As to his other gripe, which he spent entirely too much time on, the book was published eight years ago in paperback by Ace, with the "Daybreak" title, but it acknowledged the original title. Undoubtedly it was more widely known to fans by the reprint name, so that in this reissue Ace would profit more by the latter name.

End of criticism of Cotts' criticism. Now, what will we do about it. There are three alternatives:

1) Accept them as they stand, bad as they are.

2) Get a new reviewer.

3) Get Cotts to improve his reviews. This means tell more, in a collection, about each story, and tell more about the plot in a novel, another thing he never does.

Of the three alternatives, (2) is probably impossible,—on the other hand, why not? Enough people have complained about Cotts to warrant getting someone else—how about Damon Knight? Or James Blish? Anyway, (1) is unbearable, and (3) is probably inconceivable, since from the tone of his reviews, Mr. Cotts is probably stubborn as a mule. So how about it, NL? If neither (2) or (3) is possible, then let us follow alternative no. 4—

4) Abolish book reviews entirely.

Chuck Cunningham

822 Cherokee Rd., NE  
Gainesville, Ga.

P.S. Either get rid of Breadfruit, or explain those puns—I haven't understood one of them yet!

● *Make you a deal. If you can figure out—for yourself—one of Breadfruit's puns, we'll take seriously your suggestions on book reviews.*

Dear Miss Goldsmith:

I have a gripe against Sam

Moskowitz. Not that his biographies are not entertaining, they are. But just how many more years is he going to go on ignoring one of the truly great writers, while telling of some that simply have to be second rate by comparison.

Let me tell him of something I tried about four years ago, as an active fan. Was writing about ninety correspondents regularly then, and from curiosity asked them what they considered the best sf and fantasy story they had ever read. Well, about seventy answered this query, and it wasn't really very surprising how they added up. A pretty solid second place went to the Ring trilogy by Tolkien, with six insisting it was the best. Heinlein got seven, with "Green Hills of Earth" taking the edge over various others. Merritt showed up five times with no great agreement on which was the top one. Leiber, with "Conjure Wife," three times. Some peculiarities, the ancient "The Willows" showed up (Algernon Blackwood) and so did "The Dying Earth." Yes, even Shaver a couple of times.

But there was no question at all about the most popular story, it was a most decisive victory, with no less than eleven votes, almost one out of seven of those who answered.

The title was "Dear Devil," the

author Eric Frank Russell. I suspect Sam has heard the name before.

Sometimes I think the reviewers and critics are just afraid of a little sentiment and humanity. They certainly seem to show it. Amis now, he dismissed this author quickly with a comment about unrealistic or some such. Al Bester not long ago listed a dozen or so top authors, and added half a dozen second raters backing them up also. But Russell? Not a word. Sometimes I think it is a conspiracy; seems the only ones that like those stories are the readers that shell out the cash to buy the magazine.

Let's see if I can't jog Sam's memory a bit, just mention a few titles. Bet there are plenty of authors around who would be plenty satisfied to turn out something comparable to the first story by this guy. Name of it was "Sinister Barrier" you know. Lots of suspense, it was exciting. An author I correspond with told me once he would love to have written another one, name of "Minor Ingredient." And where might I ask do you find such humor nowadays as that displayed in "Diabologic," or "Alamagoosa"? Not often either that an author displays such cleverness as "Plus X," or "The Undecided," "The Timid Tiger," or "A Drop of Oil." Space opera? You bet, let them try to match "Sentinels of Space,"

or "Metamorphosite" or let them also try displaying the horror and excitement of "Call Me Joe." Another little shuddery horror, too, but guess lots of them will call it just melodrama. The name of that one is "I am Nothing." The dreamy sort, just idea fiction, but mighty pleasant reading, "Fast Falls the Eventide" is one.

And always and forever, the one thing he did better than anyone else ever did, the humanitarian kind of stories: "Dear Devil," "The Witness," "Somewhere a Voice." And let us not forget he also turned out a story once name of "And Then there were None." Remember?

Pretty versatile author, wouldn't you say Sam? How about it?

Clayton Hamlin

Southwest Harbor, Me.

• *Gripe taken under advisement.*

Dear Editor:

Huzzah to Ben Bova! I never thought one author could make an article so informative and interesting at the same time. Now, in the July issue, he has destroyed many of my mental pictures of the planets (Venus as a hot tropical forest—Jupiter as a freezing cold iceball), and I must congratulate him for a really fine piece of writing, ("The Three Requirements of Life in the Solar System").



Breadfruit is getting worse. The July issue is no exception, but since it takes up only  $\frac{1}{4}$  of a page, we'll let you have your little whim.

I thought that Julian Reid's letter was a little misplaced, and got the impression myself that "Pawn," at least, was just good fun.

For once I agree with S.E. Cotts—about *Stranger In a Strange Land*—and about his reply to Mr. Tilton. *Stranger* is one of the worst Heinlein novels I have ever read—and yet some people are even considering it for the Hugo!

Your editorial was very interesting—astronomy fascinates me, and I would like to see more along this line in your future issues.

Of the stories, all were average save "A Prison Make" (W. W. Stuart) which I thought was one of the best you have run in several issues. Your serial ground off to a fairly slow start, but it shows signs of shifting into high next time around.

Why don't we have a poll for the "Best Ziff-Davis Serial of 1961"? My vote is for Bannister's "Maganthropus," which barely edges out White's "Second Ending." Anyone care to comment?

Bill Read  
413 Oak Ridge Lane  
Omaha, Neb.

● We have Bova working on more fact articles which we think you'll find equally stimulating.

Dear Editor:

Concerning Ben Bova's article in the July 1962 issue, you may be interested to know, and you might pass this on to Mr. Bova, that there are three other adjectives or nouns pertaining to Venus or the inhabitants thereof preferable to the form he used, *Venusian*, which is a derivation by false analogy.

Adjectives and inhabitant names in general are derived from the genitive cases of the planet names, Martian from *Martis*, Jovian from *Jovis*, etc. The genitive of Venus is *Veneris*, hence *Venerian* is the proper name for an inhabitant of Venus.

Another possibility, suffering less than *Venerian* from unfamiliarity or unfortunate connotations, is *Venustian*, derived from an alternate root, *Venustis*. You won't find this particular form in the dictionary (Webster's Third), although the root appears, but it has more to recommend it than any other form, since it is recognizable and easy to pronounce, and is a correct derivation.

Still a third name is *Venutian*, a derivation by false analogy with *Martian*. While it is a false derivation, it looks and sounds better than *Venusian*, which

... OR SO YOU SAY

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tends to get the pronunciation Vee-nooze-eeun, instead of the light and airy Vee-new-shun that it should be.

Hence, of false analogies, Venutian is preferable to Venusian. Of correct derivations, either Venarian or Venustian is preferable to Venutian, with Venustian having the edge. It is, perhaps, unfortunate that Venus has so many possible inhabitant names, with the most obvious being the least desirable.

Philip N. Bridges  
1500 Randolph Rd.  
Rockville, Md.

• *Since it is all so complicated, let us hope that Venus is uninhabited. Simpler all around, eh?*

Dear Editor:

In your reply to my recent letter querying the meaning of Benedict Breadfruit, you said, "The clews are right in view." I have two comments: 1) "clews" is spelled "clues"; 2) Could it be that one of those puns uses the author's real name?

Arnold Katz  
98 Patton Blvd.  
New Hyde Park, N.Y.

• *Up to now, the pun revealed the name of a science fiction author. In VIII the author of the series is unmasked. In reference to 1), you'll find that either spelling is correct.*



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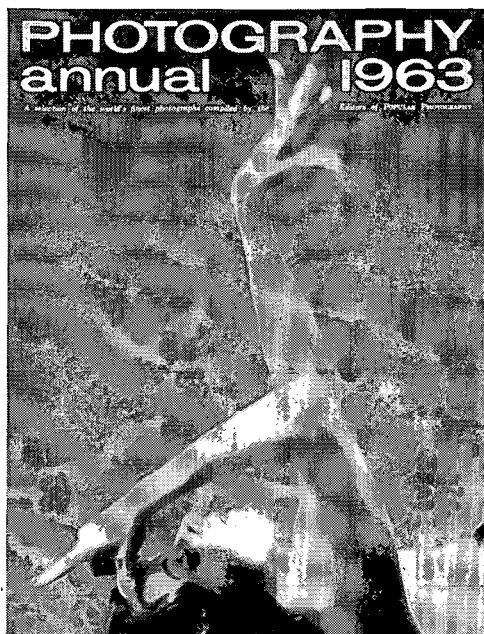
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